Readiness Proposal

with Global Green Growth Institute (GGGI)

for Republic of Rwanda

26 January 2020 | Adaptation Planning

Readiness and Preparatory Support **Proposal Template**

Programme title:	National Adaptation Readiness and Preparatory Support for Building Flood Resilience Capacities in Rwanda
Country:	Rwanda
National designated authority:	Rwanda Environment Management Authority (REMA)
Implementing Institution:	Global Green Growth Institute (GGGI)
Date of first submission:	3 April 2019
Date of current submission / version number	10 January 2020 V.4

GREEN CLIMATE FUND

How to complete this document?

- Please visit the Empowering Countries page of the GCF website to download the Readiness Guidebook and learn how to access funding under the GCF Readiness and Preparatory Support Programme.
- 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 to countries@gcfund.org.
- 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.

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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.

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1. SUMMARY			
Country submitting the proposal	Country name: Rwanda Name of institution representing NDA or Focal Point: Rwanda Environment Management Authority (REMA) Name of contact person: Eng. Coletha U. RUHAMYA Contact person's position: Director General & NDA Focal Point for Rwanda Telephone number: +250 252580101 Email: cruhamya@rema.gov.rw Full office address: Rwanda Environment Management Authority (REMA), KG 7 avenue, Kigali, Rwanda Additional email addresses that need to be copied on correspondences: nda@rema.gov.rw; jkabera@environment.gov.rw ; fmunyazikwiye@rema.gov.rw		
Date of initial submission	3 April 2019 (enter tentative date of submission by the NDA)		
Last date of resubmission	19 November 2019	**Version number**	V.3
Which institution will implement the Readiness and Preparatory Support project?	☐ National designated authority ☐ Accredited entity ☒ Delivery partner Please provide contact information if the implementing partner is not the NDA/focal point Name of institution: Global Green Growth Institute (GGGI) Name of official: Hyoeun Jenny Kim Position: Deputy Director-General & Head of Green Growth Planning and Implementation Telephone number: +82 2 2096 9991 Email: jenny.kim@gggi.org Full office address: 19 F Jeongdong Building, 21-15, Jeongdong-gil, Jung-gu, Seoul 04518 Republic of Korea Additional email addresses that need to be copied on correspondences: inhee.chung@gggi.org dan.ogbonnaya@gggi.org gcfliaison@gggi.org		
Title of the Readiness support proposal	National Adaptation Readiness and Preparatory Support for Building Flood Resilience Capacities in Rwanda		
Type of Readiness support sought	Please select the relevant GCF Readiness activity area below (click on the box): ☐ I. Country capacity for engagement with GCF ☐ II. Country programming process ☐ III. Direct access to climate finance ☐ IV. Climate finance accessed ☒ V. Formulation of national adaptation planning and/or other adaptation planning processes		

Brief summary of the request	Please include a brief description of the current status of needs in the country and the general readiness context (including non GCF initiatives); specific readiness challenge in the context of climate change; solution/outcome identified. Please also explain how GCF Readiness support activities will advance this solution in the context of climate change; how it will add value to national processes and how this change will be visible over time. (200 words maximum) Rwanda is undergoing rapid urbanization as one of its main economic growth and transformation drivers, while risks from climate change continues to pose a challenge. Although there have been past and on-going interventions in the area of building climate resilience and adaptation, limited, if any, activities focus on interventions related to urban and the built environment. This National Adaptation Plan (NAP) Readiness project therefore aims to enhance Rwanda's capacity to respond to climate change in high-risk zones by implementing a NAP for integrated flood and landslide management in urban areas. This will be done by 1) developing the capacity of the National Designated Authority (NDA) and related institutions and, 2) strengthening coordination with relevant stakeholders to plan and respond to the most urgent needs for mitigating climate-induced risks and hazards. This proposal addresses the gaps assessed through 1) the National Risk Atlas of Rwanda, which includes landslide hazard assessment using the Spatial Multi Criteria Evaluation (SMCE) process and flooding hazard assessment using the GIS Flood Tool (GFT) (2018), 2) the identification of priority and at-risk areas in the urbanization planning process as part of the master plan and district development strategies (DDS) (2019), and 3) through a consultative process with representatives from key institutions (see Annex 1) that has identified five critical gaps as follows: i) **Lack of coordination.** Limited multi-stakeholder cooperation and inter-ministerial coordination exists for flood and landslide resilience across national and sub-national actors, civil society and private sector stakeholders; ii) **Lack of private sector engagement** on issues of resilience and adaptation for flood management; iii) **Limited access to finance** and the need to mobilize international and domestic resources with an emphasis on securing co-financing from national sources; iv) **Lack of awareness (and in some areas capacity)** of key stakeholders; v) **Limited monitoring and evaluation** of existing and upcoming interventions; and vi) **Lack of technical studies** for effective storm water and landslide management in Kigali City and urban areas outside Kigali experiencing rapid growth that are highly vulnerable to floods and landslides. The activities outlined in this proposal are aligned with and in response to critical needs highlighted by the Government of Rwanda (GoR)'s Assessment of Climate Change Vulnerability in Rwanda (2019) and National Rainwater Harvesting Strategy (2016), both of which specified a lack of integrated management, the fragmentation and poor coordination between institutions, and inadequate monitoring and evaluation of interventions.[1] The proposed activities aim to bridge the gap between various entities responsible for the planning and prevention of landslides and flooding including the Ministry of Infrastructure, the Ministry of Environment, the Ministry in Charge of Emergency Management, Meteo Rwanda, and sub-national entities including the City of Kigali. The proposal aims to substantially strengthen the coordination required for planning and collaboration in preparation for the projected increase in severity and frequency of landslides and flooding and their impact on the rapidly urbanizing centers in Rwanda. These areas of intervention have been developed in a consultative process led by the GoR and validated in collaboration with stakeholders at both the national and sub-national level. Therefore, the decision to focus on flood and landslides risks for this proposal was based on government's highest priority to ensure that past and ongoing adaptation interventions related to flood risks and landslides especially in the urban areas are translated into concrete projects and impacts beyond assessments and studies. See Annex 1 for consultations and meetings conducted in preparation of the proposal.

	This NAP grant will build upon the improved readiness capacity established through the recently completed GCF Readiness project titled "Readiness and preparatory support to implement Green City Development Projects in Rwanda's Secondary Cities" (2018-2019) and aims to strengthen national interest, awareness and capacity to directly access GCF opportunities. Moreover, the AE, NDA, and other relevant central institutions and local governments will be fully equipped to support the City of Kigali and at least four urban areas outside Kigali City around Rwanda's four provinces that have been experiencing rapid growth, coupled with recurrent floods and landslides that have significantly hampered the country's efforts to become climate-resilient, economically developed middle-income country status. This NAP grant will also strengthen coordination, complement and build synergies with the following previous, on-going and upcoming projects: Nordic Development Fund (NDF) project 'Kigali Flood Control and Integrated Urban Catchment Management [NDF C118/C119]' which is undergoing final approval stage. The objective of the proposed NDF project is to support the City of Kigali and its inhabitants to improve climate resilience through better management and flood control of urban sub catchments. The project implementation period is from 2019-2024 and is supported by World Bank and implemented by the NDA (REMA). The proposed GCF NAP grant will therefore strengthen coordination and build synergies with the NDF project activities to ensure that the technical studies, prioritized flood reduction investments are taken forward through the development of concept notes and financing models as a part of this proposal. Global Environmental Facility (GEF) Least Developed Countries Fund (LDCF), and the GCF FP073 project "Strengthening Climate Resilience of Rural Communities in Northern Rwanda" have focused-on agriculture, forestry, water and eco-system-based adaptation planning. The linkages therefore, stem from using the outcomes and outputs from these past examples and ongoing adaptation planning process and integrate NAP into Rwanda's Urban Development focusing on a high priority area of flood and landslides which affects the majority of the urban and rural poor in the flood and landslide risk prone areas. GEF funded four-year project "Building the capacity of Rwanda's government to advance the National Adaptation Planning Process", which includes advancing climate resilient practices and technologies in drought-prone areas by applying ecosystem-based adaptation. This GEF project initiated implementation at the end of 2019, with NDA as the executing agency. The proposed GCF NAP Readiness will be developing concept notes that will translate into full funding proposals related to flood and landslide risks which builds on the expected results from the GEF project. Planned revision of Green Growth and Climate Resilient Strategy (GGCRS) 2011 which will encompass all the priority sectors identified in the NAPA process to develop a comprehensive Rwanda NAP. The Delivery Partner is already working closely with the Ministry of Environment and UNDP to strengthen the details of the ToRs that will ensure that the adaptation component of the GGCRS revision is developed. This NAP Readiness will provide the needed support to ensure that adaptation component is adequately addressed in the revised GGCRS. Moreover, Foresight Methodology[2] that will be used for the GGCRS revision process may also be applied in certain activities of the project to ensure consistency and sustainability in the adaptation planning process. The completed GCF Readiness for Green Cities Development produced Detailed Master Plans for Nyagatare and other Secondary cities with key emphasis on the zoning factoring the need for resilience and adaptation to flood and landslides. Data from the implementation of this project which ended in July 2019 will be fed into the activity level baselines and indicators to ensure continuity with adaptation planning, but most importantly, project design and investments which will bring solutions to these challenges.

[1] REMA (2019) Assessment of Climate Change Vulnerability in Rwanda – 2018, Rwanda Environment Management Authority: Kigali; Government of Rwanda (2016) National Rainwater Harvesting Strategy. Ministry of Natural Resources: Kigali.
[2] https://www.undp.org/content/dam/undp/library/capacity-development/English/Singapore%20Centre/GCPSE_ForesightManual_online.pdf

Total requested amount and currency	USD 1,823,993	**Anticipated duration**	24 months
Has the country received or is expecting to receive other Readiness and Preparatory Support funding allocations (including adaptation planning) from GCF or other donors?		☒ Yes ☐ No If yes, please describe the scope of work and the scope of support provided or expected to be provided by the GCF and/or other institutions (100 words). The project aligns with existing GCF readiness support and the 2011 Green Growth and Climate Resilience Strategy (GGCRS), the country's roadmap for a climate resilient, low carbon economy by 2050 through sustainable land use, water resource management and reduced vulnerability to climate change. Ongoing projects financed by the GCF include the following: <u>Readiness activities:</u> • Readiness support to implement Green City Development Projects in Rwanda's Secondary Cities, 2018-2019; Delivery Partner: GGGI; budget: USD 600,000. • Readiness support to NDA to accelerate access to GCF resources, 2015; Delivery Partner: REMA; budget: USD 300,000. <u>GCF Projects</u>: • "Strengthening climate resilience of rural communities in Northern Rwanda" (FP073), MoE, 2018-2024, USD 32.8M. • "KawiSafi Ventures Fund in East Africa" (FP005, Rwanda and Kenya), 2016-2021, USD110M. Other key adaptation projects in Rwanda that has received funding support from other donors are included in Figure 6 on page 17 of this document.	

2. BACKGROUND

Current situation in the context of climate change. Rwanda is one of the fastest growing economies in the world with economic growth averaging 7% since 2000 and 10.6% in GDP in 2018.[3] Rwanda is also the most densely populated country on the continent of Africa and one of the most densely populated countries in the world. With a projected urbanization rate of 35% by 2020, Rwanda's cities are critical component contributing to the country's continued economic development [4]. In Rwanda, urbanization and agglomeration are cited as one of six future drivers of poverty reduction and economic growth by the World Bank (2019).[5] Studies contributing to the World Bank report found that urbanization accounted for 37% of GDP growth and 48% of national labor productivity growth since 2002.[6] While Rwanda's economy continues to grow, the development of the country – as well as the safety and security of its inhabitants – is severely threatened by the recurrent climate-related disasters of flooding and landslides. In addition to conversion of forest areas to cropland, built-up areas have increased by an estimated 304.3% (355.02 km^2) from 1990 to 2016[7] resulting in a national mean run-off depth increase particularly in urban areas. The effect of flooding and landslides are exacerbated by the country's hilly terrain with a slope of 16-40% slope covering nearly 45% of the country.[8] Furthermore, urbanization has resulted in a decrease in permeable surface area[9] in urban centers resulting in devasting impacts for the country's informal settlements, many of which are situated in at-risk, flood-prone areas in lower elevation of city centers. The result is the disparate impact of flooding and landslides on vulnerable communities living in unplanned and informal settlements (current estimates for the population living in unplanned settlements in Kigali is 79%). [10]

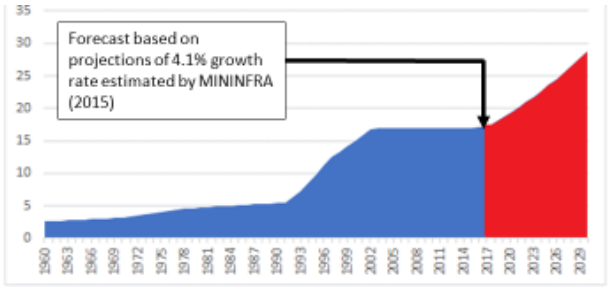
Rwanda is highly prone and vulnerable to a wide range of natural hazards including floods, droughts, earthquakes, storms and lightnings. Over the last decade, the frequency and intensity of natural hazard-induced disasters have significantly increased, raising the toll of human casualties as well as economic and environmental losses. Rwanda has witnessed a number of natural and man-induced disasters that have culminated in the loss of lives and property and in large scale displacement. This vulnerability coupled with the degradation of natural environment and climate change magnifies the risk. Rwanda has a high population density of 471.4 per ha in 2015, projected to reach 649.5 by 2030. Data indicate that over 157,000 people are vulnerable to drought, 7,431 are vulnerable to landslide and over 5,000 houses are vulnerable to windstorm. Vulnerable populations are often female-headed households and poor, rural farmers. The increasing disaster and climate change risks are real and an ever-growing concern in Rwanda which could erode key development gains achieved over the past years and may further impede the achievement of the SDGs.

This NAP project proposes to establish a Technical Advisory Group (TAG) as part of its implementation structure to target private sector practitioners. This is based on the fact that current rapid urbanization in Rwanda has seen an increase in building and construction both in the formal and informal sectors. There is, therefore, the need to empower and engage the limited expertise especially in the private sector to deliver climate resilient and low carbon related projects in Rwanda's built environment. For example, climate adaptation planning and implementation related tools and technologies are changing with newer ideas and inventions to increase efficiency

[3] IMF (2018). World Economic Outlook (WEO), International Monetary Fund: Washington, DC.
[4] MININFRA (2015). National Urbanization Policy. Ministry of Infrastructure: Kigali.
[5] World Bank (2019). Future Drivers of Growth in Rwanda: Innovation, Integration, Agglomeration, and Competition. The World Bank Group: Washington, DC.
[6] Diao, X., Randriamamonjy, J., and Thurlow, J. (2017) Urbanization and the Future of Economic Development in Rwanda. International Food Policy Research Institute: Washington, DC. Background paper for *Future Drivers of Growth in Rwanda*.
[7] Karamage, F. (2017) Modeling Rainfall-Runoff Response to Land Use and Land Cover Change in Rwanda (1990-2016). *Water*.
[8] Slope is considered a principle factor and direct influence in the determination of both the intensity and the character of landslide. Bizimana, H., and Sönmez, O. (2015). Landslide Occurrences in the Hilly Areas of Rwanda, Their Causes and Protection Measures, *Disaster Science and Engineering*, 1(1), pp 1-7.
[9] For example, a study of the Nyabugogo catchment area revealed +70% of high-density tin roof area, contributing to flooding in urban areas with high population density and representing a missed opportunity for potential rainwater harvesting. Ministry of Environment (2015) Rwanda National Water Resources Master Plan. MoE: Kigali.
[10] Hitayezu, P., Rajashekar, A., Stoelinga, D. (2018). The Dynamics of Unplanned Settlements in the City of Kigali. Laterite Ltd. and International Growth Centre. Ref: C-38312-RWA-1

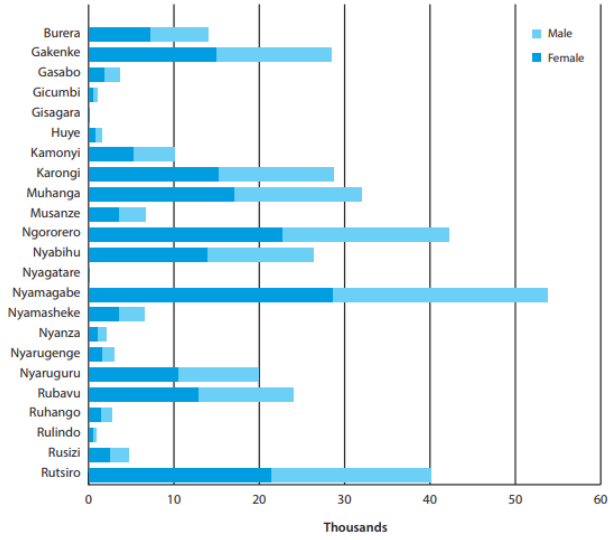
and reduce cost. Hence it is a daunting task for private sector to stay updated with the relevant technical know-how on these changes to deliver robust climate resilient projects. The Technical Advisory Group will create that value addition to inform the key members whose role it is to take up related public or government institution policies to inform their members on the new knowledge to adapt to the negative impacts of climate change. Moreover, as leaders of their different industries and businesses, their influencing role makes it an effective platform to equip them with the know-how to reach out to the majority of the practitioners under their umbrella.

Figure 1: Urban population of Rwanda as percentage of total (World Bank World Development Indicators 2019)



Rwanda's sensitivity to climate change was assessed as high and its adaptive capacity low in a national study on climate vulnerability.[11] Rapid urbanization and climate change have resulted in recurrent flooding in urban areas. In 2018, flooding and landslides resulted in damages of 236.6 M USD.[12] Projections[13] indicate climate variability will cost the economy of the country 1% of GDP each year by 2030.[14] This proposal will address gaps such as lack of coordination among public and private sector entities, lack of awareness, and capacity of stakeholders[15] in the management of flooding/landslides[16] by building on existing baseline studies, eliminating duplication of effort, increasing private sector cooperation, and improving coordination mechanisms within and outside of government.

Figure 2: Population exposed to landslide risk in very high susceptibility zones (MIDIMAR 2012)



Gender considerations. The Ministry responsible for gender is the Ministry of Gender and Family Promotion (MIGEPROF). The National Institute of Statistics of Rwanda (NISR) also produces sex disaggregated data in the Integrated Household Living Conditions Survey and in the National Gender Statistics Report. In addition, the Office of the Prime Minister established the Gender Monitoring Office (GMO) in 2007, which monitors gender equality and accountability across all government agencies. MIGEPROF, NISR, and the GMO will be included within the coordination mechanisms of the proposed activities. The Government of Rwanda has also produced a document, A Guideline on Gender in Disaster Management as well as the National Policy on Gender, which identifies and promotes the adoption of sector specific policies including in disaster management and preparedness. The guidelines specify that, "…analysis has proven that – in order to be effective – the integration of gender in disaster

[11] REMA (2015). Baseline Climate Change Vulnerability Index for Rwanda. Kigali.
[12] The Ministry in Charge of Emergency Management (MINIEMA) has reported that as of October 2018, 243 people have lost their lives because of flooding and landslides, 294 were injured, 15,482 houses were damaged, 10,616 ha of crops were damaged during 2018.
[13] IPCC (2018). Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C. above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)]. In Press.
[14] SEI (2009). The Economics of Climate Change in Rwanda. Report to the GoR and DFID. Stockholm Environment Institute: Stockholm.
[15] MINIRENA (2016). National Rainwater Harvesting Strategy. Ministry of Natural Resources of Rwanda: Kigali.
[16] MINIRENA (2006). Rwanda's National Adaptation Plan of Action (NAPA). Ministry of Natural Resources of Rwanda: Kigali. The NAPA includes improved Integrated Water Resource Management (IWRM) as a priority to respond to critical need areas prone to flooding and landslides.

management should not be limited to response interventions, but has to be included also in preparedness, mitigation, and prevention initiatives. **A more accurate action is therefore required in order to mainstream gender in all specific and different phases of disaster management in Rwanda both at the national and local level."**[17]

These guiding documents will be used as a basis for carrying out a gender assessment and developing fit-for-purpose gender and social inclusion indicators at the start of the project and incorporated into the activities of the NAP across all outcomes with particular emphasis on Output 4: Mechanisms for Reporting, Monitoring and Review of adaptation and resilience planning progress developed to gather lessons and integrate them into future iterations of the identified flood mitigation and landslide management planning process.

Lastly, GGGI Rwanda (delivery partner) is currently providing technical assistance to the Ministry of Infrastructure to develop and implement a Gender Mainstreaming Strategy. These activities will also be linked to address gender considerations related to the management and prevention of flooding and landslides. The Rwanda Environment Management Authority (REMA) has also produced the Assessment of Climate Change Vulnerability in Rwanda (2018), which addresses the social dimensions of adaptative capacities of different segments of the population. Sex-disaggregated data was also collected in the report on The Dynamics of Unplanned Settlements in the City of Kigali (2018). The report found female-headed households to be the most vulnerable sub-group within unplanned settlements in the City of Kigali. The National Risk Atlas (2015) also references women's vulnerability to natural disasters. The document notes that, "the highest percentage of employed population can be found in rural areas which account for 84%. The employed population in urban areas is dominated by males, contrary to rural areas where the majority of the working population is female. The resilience of employed women is usually enhanced which makes it easier for them to cope with and recover from disasters compared to unemployed women,". This observation – a higher proportion of unemployment among females in urban areas – supports the rationale for national adaptation planning strengthening and targeted, gender-sensitive interventions in built-up areas. The studies and reports highlighted here will be used as a basis for conducting a gender assessment and developing a gender equality and social inclusion action plan to mainstream gender and social considerations in the activities proposed.

Existing country strategies and policies in response to climate change. The Government of Rwanda (GoR) has committed to becoming a climate-resilient country through strategy documents including Vision 2050 and policies such as the Rwanda National Strategy on Climate Change and Low Carbon Development, the Green Growth and Climate Resilience Strategy (GGCRS), the National Strategy for Transformation (NST), and the Economic Development and Poverty Reduction Strategy 2 (EDPRS2). The National Roadmap for green secondary cities development is an implementation tool for EDPRS 2 and the National Strategy for Climate Change and Low Carbon Development.

The proposed NAP is anchored on the Government of Rwanda's National Strategy for Transformation (NST1 2018-2024) which is the implementation instrument for the remainder of Vision 2020 and the first 4 years of Vision 2050. Further justification is made in the proposal to highlight the high priority placed on building flood resilience in Rwanda and how this NAP Readiness will help to "produce precise and implementation-ready planning" bearing in mind the need to capacitate the private sector and practitioners to mainstream adaptation and resilience practices into their planning, design and construction. Realizing the development challenge of the majority of private sector actors still grappling with adapting to the impacts of climate change, the GoR developed several policies and strategies to guide the country in creating the enablers for citizens to take action. The Green Growth and Climate Resilience Strategy (GGCRS) was adopted in 2011 with a vision for Rwanda to be a developed, climate-resilient and low-carbon economy by 2050. The GGCRS focuses on both adaptation and mitigation actions. A 2018 evaluation of the GGCRS implementation confirmed that the strategy is still highly relevant to Rwanda's long-term Vision 2020/2050, the Sustainable Development Goals (SDGs) agenda 2030 as well as to the medium-term development framework EDPRS 2 that has given way to the first phase of the National Strategy for Transformation (NST-1) for 2018 to 2024. After 7 years of implementation, the strategy is now being reviewed. The planned revision of GGCRS will also take cognizance of the key provisions of the new National Environment and Climate Change Policy and other relevant sectoral policies. The NAP Readiness activities proposed here would result in contributing to the GGCRS revision as well as the preparation of the Rwanda National Adaptation Plan (NAP) for submission to the UNFCCC.

[17] MIDIMAR (2012). A Guideline on Gender in Disaster Management. Ministry of Disaster Management and Refugee Affairs: Kigali, p 14.

In addition, led by Rwanda's Ministry of Environment (AE), in partnership with the Rwanda Environment Management Authority (NDA), the Rwandan NAP process has received support from UNDP-UN Environment NAP Global Support Programme (NAP-GSP). Since the launch of the NAP process, Rwanda has leveraged GCF support to develop climate-resilient settlements for families living in northern Rwandan areas prone to climate impact by supporting community-based adaptation planning and livelihoods diversification. Rwanda is also planning to launch the GEF funded four-year Project on "Building the capacity of Rwanda's government to advance the National Adaptation Planning Process." This approved GEF LDCF project will assist the GoR with implementing the NAP process by strengthening its: i) technical and institutional capacity for medium- and long-term adaptation planning; ii) technical capacity to mobilise funding for climate change adaptation; and iii) scientific capacity to monitor, evaluate, and generate knowledge on adaptation interventions.

In the Third National Communication (TNC) under the United Nations Framework Convention on Climate Change (UNFCCC), the main technical and capacity constraints and gaps identified were the low level of knowledge, skills and awareness of the climate change issues among the national stakeholders, as well as common objectives and clear roles for each of the stakeholders. In the context of Rwanda's international commitment to climate change mitigation and adaptation, this GCF NAP Readiness proposal addresses three out of five enabling pillars of the National Determined Contribution (NDC): 1) finance; 2) capacity building and knowledge management; and 3) innovation and infrastructure. It is aligned with Rwanda's NDC programmes of action related to mitigation and adaptation activities:

- Integrated approach to sustainable land use planning and management;
- Implementation of low carbon urban systems;
- Efficient resilient transport system; and
- Green industry and private sector development.

The proposed project aims to **build upon the existing strategies and policies to deliver coordinated and targeted multi-stakeholder engagement between agencies for effective flood and landslide planning and prevention in the most vulnerable zones of Rwanda while being aware of how this intervention fits under the overall national adaptation development efforts**. The project will also build upon municipal and district level strategies to increase climate-resilience at the local level and aims to engage communities in at-risk areas. At the district-level, District Development Strategies (DDS) have been drafted to guide stakeholders and local government actors in the planning process for green city development. The City of Kigali is also undergoing a revision of the 2030 masterplan, which will similarly guide the incorporation of climate resilience strategies into city planning. The district and city-level plans are developed in consultation with national stakeholders and incorporate national-level plans and strategies on low-carbon growth and development to ensure alignment and harmonization. The diagram below provides an overview of the linkage between planning documents at the city, district, and national level. The private sector plays a very crucial role at each level of these plans and this NAP proposal will strengthen these linkages to ensure that adequate capacity is provided at each point through consultations, training and development of the required adaptation planning tools and guidelines.

Figure 3: Linkage between Planning Documents (MININFRA & GGGI National Roadmap 2015)

Existing capacities. The GoR has developed the capacities of its constituent agencies to address areas of flooding and landslide management, planning, and prevention under their respective mandates. In the last decades, the government has invested in building capacity for disaster risk management through providing tools for early warning systems with the national meteorological institute, METEO Rwanda. Yet, the capacity to respond to climate related disasters remains inadequate and needs be strengthened through this NAP Readiness project. Previous sub-national adaptation plans have focused mostly on natural resource management in agriculture, landscape and forests. This NAP Readiness project will result in a more robust sub-national adaptation plan that includes Rwanda's built environment. At the same time, broader and more complete national adaptation planning will need to be complemented by actions that address the primary gaps in inter-ministerial coordination and multi-stakeholder engagement among national and sub-national entities as well as the private sector.

Engagement with the private sector enabled through the proposed NAP. The activities proposed will incorporate existing efforts to engage with the private sector that have been established through the recently completed GCF Readiness Programme. The National Coordination Team (NCT) has been revitalized with the Private Sector Federation (PSF) serving as co-chair. The PSF is an umbrella organization for private sector actors and affiliated associations within Rwanda. The engagement of the PSF in the NCT has been a key outcome of the readiness that would support further integration of the private sector into the issues of climate resilience, disaster preparedness, and opportunities for investment in nature-based solutions and green infrastructure for flood management.

This NAP proposal will also build upon existing strategies developed by the Rwanda Green Fund (FONERWA) to establish private sector funding windows for SMEs, enterprise incubation, and business acceleration. Lastly, this NAP will incorporate a Technical Advisory Group with a target of 90% participation from private sector actors. The Technical Advisory Group will provide a platform for institutional private sector actors (including the Private Sector Federation and Rwanda Development Board) as well as private companies and practioners to provide input, coordinate, consult, and inform the Project Steering Committee. These activities will be facilitated and coordinated by a national consultant in the role of Private Sector Engagement Specialist to ensure active participation and consultation with the private sector throughout the duration of this GCF NAP program. The Private Sector Engagement Specialist will also be responsible for identifying potential opportunities, maximizing synergies, and connecting previously established initiatives across multiple stakeholders to maximize the involvement of the private sector.

Adaptation planning capacity at key government agencies:

- **Ministry in Charge of Emergency Management (MINEMA):** Under the MINEMA, there is existing capacity in the areas of early warning systems, landslide susceptibility mapping, and a climate-induced disaster hazard vulnerability atlas. The atlas was launched on September 10, 2015 and includes mapping of five flood plain areas including Nyabarongo plain (Bugesera, Kamonyi, Kicukiro, Nyarugente, Rwamagana, Ngoma-Nyabisindu Nyanza District), Sebeya (Ngororero, Rubavu, and Rutsiro), Mukungwa (Musanze, Nyabihu, Muhanga, Gakenke), and Kagitumba in Nyagatare District. This exercise has clearly identified at-risk areas and zones as well as mapping of vulnerable urban areas, at-risk features of the built environment, and communities in at-risk zones, which contributes to GoR adaptation planning and implementation.
- **Ministry of Environment (MoE):** The Ministry of Environment is the GCF Direct Access Entity (DAE) and has the mandate to develop policies and guidelines identifying areas of risk such as the "Mapping of Erosion in Rwanda and Guidelines for Erosion Control", which details the erosion prone areas in Rwanda, degraded areas requiring restoration, and key areas of intervention. The MOE has developed reports including the "Assessment of Current Storm Water Management and Flooding in the City of Kigali". The Rwanda Environment Management Authority (REMA) operates under the auspices of MoE and has developed the Baseline Climate Change Vulnerability Index for Rwanda in 2015 and Assessment of Climate Change Vulnerability in Rwanda - 2018, which will be used to determine the most appropriate areas of intervention. REMA has also completed detailed "Sub-Catchment Management Plans for Gikondo and Byabugogo Wetland Systems". In addition, the MoE houses the Rwanda Water and Forestry Authority (RWFA), which also completed an assessment on "Storm Water Management for Flood Control in the City of Kigali" and "Mapping of Erosion in Rwanda and Guidelines for Erosion Control". RWFA is also responsible for populating and maintaining the Rwanda Water Portal and for the availability of catchment plans using Water Evaluation and Planning System (WEAP) models, which take into consideration projects

based on climate change scenarios, macro-economic development, and population growth as well as possible interventions.

- **Ministry of Infrastructure (MININFRA):** MININFRA has developed policies for infrastructure, transport, road maintenance, and guidelines for infrastructure across four sectors: transport, energy, water and sanitation, and urbanization and human settlements. The Rwanda Transportation Development Agency (RTDA) also operates under the auspices of MININFRA and is currently the recipient of the Nordic Development Fund (NDF C79) grant for Developing Capacity for Climate Resilient Road Transport Infrastructure (2016-2020). RTDA has drafted Proposed Guidelines for Mainstreaming Climate Change Adaptation into Environmental and Social Impact Assessment (ESIA) for Road Transport Infrastructure in Rwanda.
- **Rwanda Meteorology Agency (Meteo Rwanda):** Meteo Rwanda is equipped with early warning systems and flood water monitoring capacity. Meteo Rwanda also produces seasonal weather forecasts and disseminates severe weather warnings.
- **City of Kigali and other Sub-national Entities:** The development of district development strategies (DDS) and city master plans have detailed projected urban growth trends and aspects of the built environment that are especially susceptible to natural disasters as a result of extreme weather events. District and city governments vary significantly in their competency and autonomy, necessitating national adaptation planning and readiness to address gaps in capacity and awareness of climate-resilient urban planning in flood-prone and landslide susceptible areas. Significant progress has been made in the six secondary cities in green city development through GCF-funded projects. This foundational awareness would be built upon to deliver integrated water resource management into urban planning processes for improved resilience and disaster preparedness.

Existing studies and reports. The following figure lists existing studies and reports that this NAP project will take stock of and ensure consistency and linkage in Rwanda's national adaptation development efforts while focusing on high-priority climate risk area of flood and landslide management.

Figure 4: Existing Studies and Reports

	Title of Study/Report	Year Completed	Published or Unpublished	Name of Institution	Type of Institution	Study/ Report Coverage Area
Disaster Risk Management	The National Risk Atlas of Rwanda	2015	Published	Ministry in Charge of Emergency Management (formerly MIDIMAR)	National Government	National (including the mapping of 5 floodplains)
Stormwater Management	Storm Water Management for Flood Control in the City of Kigali	2018	*Unpublished*	Integrated Water Resources Management Department of Rwanda Water and Forestry Authority	National Government (Department within the MoE)	National
	Assessment of Current Storm Water Management and Flood in the City of Kigali Areas	2018	*Unpublished*	Ministry of Environment	National Government	City of Kigali
	Report on the Areas Affected by Floods Caused by Heavy Rain in the City of Kigali	2018	*Unpublished*	City of Kigali	Sub-national	City of Kigali

	Volcanoes Area Flood Management	2017	Published	Water for Growth Rwanda	NGO	Sebeya River Basin
Catchment Studies/ Plans	Detailed Sub-Catchment Management Plans for Gikondo and Nyabugogo Wetland Systems	2018	*Unpublished*	Rwanda Environment Management Authority	National Government	Gikondo and Nyabugogo Wetland Areas
	Integrated Water Resources Management Programme Rwanda: Muvumba Catchment Plan 2018-2024	2018	Published	Water for Growth Rwanda	NGO	Muvumba Catchment
	Water Balance and Allocation Modelling in Rwanda	2017	Published	Future Water and Water for Growth Rwanda	International research and consulting firm/NGO	Four demonstration catchment areas: Upper Nyabarongo, Sebeya, Nyabugogo, and Muvumba.
	Catchment Plan Upper Nyabarongo (2017-2023)	2017	Published	Water for Growth Rwanda	NGO	Catchment (Nyabarongo)
	Upper Nyabarongo Catchment Rehabilitation Plan	2017	Published	Ministry of Environment	National Government	Catchment (Nyabarongo)
	Nyabugogo Catchment Plan	2017	Published	Ministry of Environment	National Government	Catchment (Nyabugogo)
	Sediment Fingerprinting for the Nyabarongo Upper Catchment in Rwanda	2016	Published	USAID and Global Water for Sustainability	Development Partner/iNGO	Catchment (Nyabugogo)
	Nyabugogo Catchment Study: Hydrology and Hydraulics Intervention Detailed Design	2016	*Unpublished*	Spea Engineering	International consulting firm	Catchment (Nyabugogo)
Climate Change Vulnerability	Assessment of Climate Change Vulnerability in Rwanda	2018	*Unpublished*	Rwanda Environment Management Authority (REMA)	National Government	National
	Mapping of Erosion in Rwanda and Guidelines for Erosion Control	2018	*Unpublished*	Rwanda Water and Forestry Authority	National Government (Division under the MoE)	National

	Proposed Guidelines for Mainstreaming Climate Change Adaptation into Environmental and Social Impact Assessment (ESIA) for Road Transport Infrastructure in Rwanda	2018	*Unpublished*	Rwanda Transport Development Agency (RTDA)	National Government (Division under the Ministry of Infrastructure)	National
	Baseline Climate Change Vulnerability Index for Rwanda	2015	Published	Rwanda Environment Management Authority (REMA)	National Government	National

Available climate data and projections. Under the Rwanda Climate Services for Agriculture (RCSA) project (March 2016 – December 2019), Enhancing National Climate Services (ENACTS) approach, an ongoing initiative led by the International Research Institute for Climate and Society (IRI) at Columbia University that aims to bring climate knowledge into national decision making by improving availability, access to, and use of climate information. Through ENACTS, Rwanda has filled in a 15-year gap in its historical meteorological records. Under this initiative, Meteo Rwanda has merged satellite data with its observations to fill gaps in both space and time and can now provide a range of high-resolution (4x4km) climate information products tailored to agricultural user needs through web-based maprooms. The maprooms provide an efficient way to access location-specific data and graphs. Furthermore, the current projections used are on a seasonal basis; however, by the end of 2019, the projections will be upgraded to 10-year projections through PRECI, a proprietary dataset housed and managed by Meteo Rwanda.[18]

The data management software currently being used, called "CLIMSOFT," is limited in function and not capable of producing some of the required reports and statistical analysis to provide accurate forecasting and early warning. Thus, there is a desperate need for more targeted and speedy information, especially for disaster risk reduction and agricultural planning. Meteo Rwanda has mentioned several times throughout the Thematic Working Group sessions that there is a lack of appropriate technology and required skills training. Government funding is not sufficient to cover quality equipment and data, regular maintenance, and calibration - processes that are crucial to collecting and providing accurate data.

Key barriers and gaps.

As mentioned in the "Current situation in the context of climate change" section above, Rwanda is highly prone and vulnerable to a wide range of natural hazards with frequency and intensity of natural hazard-induced disasters significantly increasing, raising the toll of human casualties as well as economic and environmental losses. Vulnerable populations are often female-headed households, poor urban households living in high-risk zones (steep slopes, wetlands, floodplains etc.) and poor rural farmers. The increasing disaster and climate change risks are real and an ever-growing concern in Rwanda which could erode key development gains achieved over the past years and may further impede the achievement of the SDGs.

While there has been adaptation planning and implementation results from the 2006 NAPA, most of these has been directed to agriculture, forestry, and biodiversity with minimal interventions in the built environment even though there has been a rapid urbanization rate.

The government of Rwanda recognizing this gap, developed different policies and plans to address the urbanization and built environment related policies in the succeeding years after 2006 NAPA.

- In 2009, the government developed and adopted the National Human Settlement policy;
- The National Urbanization Policy was reviewed in 2015
- In 2013 Kigali Master Plan was developed and revision started in late 2018.

[18] Bilateral consultation with Alphonsine Musanganire, Meteo Rwanda, Tuesday, July 30, 2019.

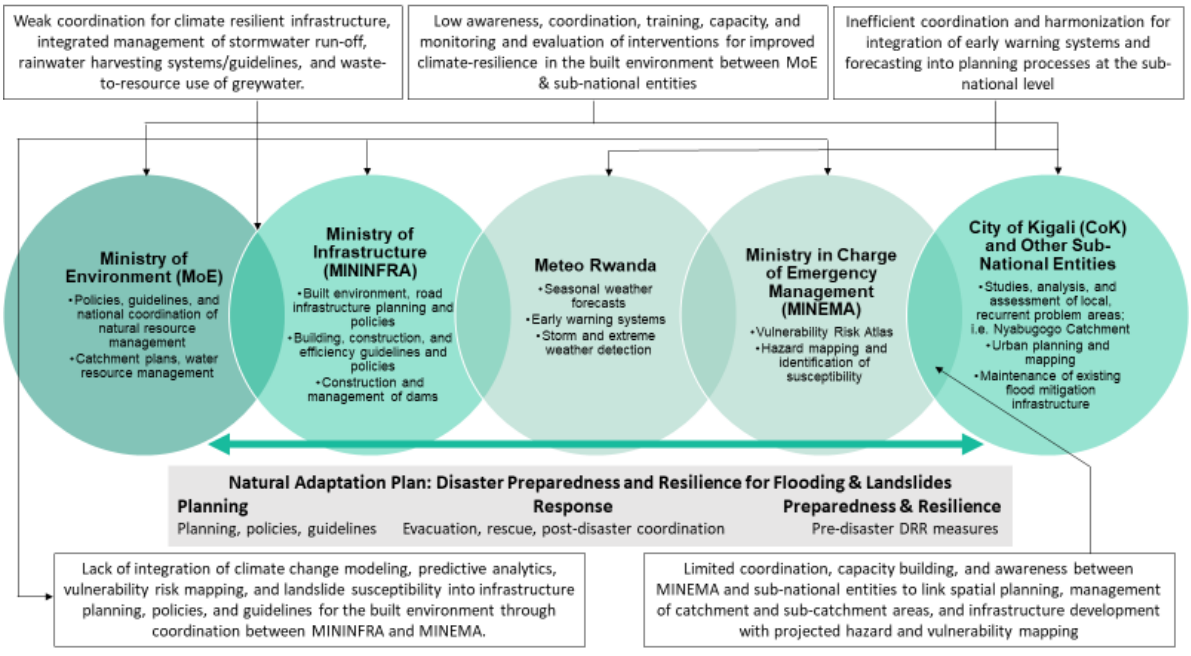
- In 2015, the National Roadmap for Green Secondary Cities Development was developed and adopted in 2016
- The 6 Secondary Cities master plans have been revised by the government with support from GCF Readiness Project in 2018. The NAP Readiness builds on the ongoing GCF Readiness implementation ending in July 2019
- An Extraordinary Cabinet meeting approved on 9th November 2018 the establishment of a Water Resources Board whose mandate would be to coordinate various stakeholders involved in water sector with special focus on the implementation of the management of water resources at a catchment level which addresses most of the negative impacts on water resources.

These policies to a great extent, show the focus given to issues related to urbanization in relation to flood resilience and adaptation in Rwanda.

Strong technical capacities exist within the GoR. However, this proposal seeks to address gaps in integrated management of stormwater run-off, coordination among government institutions and between national and sub-national entities, as well as monitoring and evaluation of interventions. Figure 4 above indicates that while the technical capacity is present to inform integrated water resources management and planning, lack of coordination has resulted in the production of several studies and reports focusing on the same areas or overlapping study areas. In 2016 and 2017, five documents were produced on the Nyabarongo catchment area alone by four different actors (NGO, national government, development partner, and international consulting firm).

This lack of coordination has resulted in the duplication efforts made by multiple stakeholders exacerbated by insufficient mechanisms for monitoring and evaluation of existing and planned interventions. **This NAP proposal would aim to streamline and coordinate the activities of key stakeholders while building on existing policies, guidelines, and strategies**. The aim of the activities will be to strengthen the ability of responsible institutions to proactively plan for extreme weather events thereby increasing the climate resilience of vulnerable communities, ensuring continued economic growth and development, and buttressing the country's poles of growth in the City of Kigali and at-risk urban areas. The proposed activities will also place a significant emphasis on mobilizing domestic resources while leveraging collaboration with the private sector to facilitate the full implementation of various adaptation activities.

Figure 5: Mapping of the key institutions responsible for national adaptation that require close coordination and alignment[19]



[19] Gap analysis findings from stakeholders consultations and bilateral meetings.

In addition, this project will address the gaps that exist between the institutions managing stormwater run-off (and grey water retention/re-use) and soil erosion, policies governing the management and development of the built environment in light of increased flooding and landslides, and guidelines for climate-resilient urban planning and growth. The coordination between the Ministry of Environment (MoE) and Ministry of Infrastructure (MININFRA) is a key objective of the proposed activities under this NAP Readiness project to incorporate climate-resilient urban planning and to effectively address the urgent need of improved disaster risk management and resilience of the built environment. While existing adaptation initiatives have addressed the natural environment, sustainable landscapes, and agriculture, the built environment in Rwanda's rapidly developing urban centers has faced inadequate coordination capacity.

Besides the lack of coordination, Rwanda also faces challenges in the following areas which this project will address directly as part of its interventions, or through collaboration with ongoing and planned adaptation activities:

- Lack of private sector engagements on issues of resilience and adaptation in general but also for flood management in particular is a critical issue for government to respond to extreme weather events as in some instances there are investments that focus on increasing GDP and creating jobs with minimum consideration to the environmental impacts and resilience. This has led to urban areas, even though serving as engines of growth and productivity, become unplanned with poor infrastructure, inviting environmental degradation, poverty and inequality. A robust engagement with the private sector who drives this growth is crucial for sustainable investments especially in a country like Rwanda where rapid development needs to factor the impacts of climate change in the areas of flood and landslide risks. Government environmental laws, regulations and policies like Environmental Impact Assessment, Strategic Environmental Assessments or geotechnical analysis during project design and implementation (e.g. buildings) needs to be strictly adhered to by private sector and businesses to ensure a sustainable and resilient future.
- Limited access to finance means that project ideas, concepts and feasibility studies do not get to implementation due to the high cost to deliver a comprehensive solution that is commensurate to the problem at hand. This is more so in building flood and landslide risk related infrastructures. For example, most road construction do prioritize access to issues related to flood control. Where flood control is factored in, these are sometimes carried out from a business as usual approach because additional financing to cater for uncertainty in weather variability or climate proofing is not available.
- Lack of awareness and capacity of key stakeholders will tamper effective and effective delivery where flood and landslide risks are involved. For example, the existence of an early warning system does not translate to immediate and appropriate response measures especially when the information is not clearly understood or accurate when it comes to weather variability.
- Limited monitoring of existing and upcoming interventions means that the quality of project outcomes and outputs are not ascertained. The implication is that projects are sometimes duplicated rather than seeking synergies, or the needed value addition is not factored in especially in a complex and rapidly changing environment.

Given their unique role in advancing the economic development of the country as well as the fact that urban climate resilience bridges the existing mandates between government entities, this proposal aims to strengthen coordination and capacity for effective integrated water resources management in an area of critical need. While efforts are underway to improve the management of soil erosion, land degradation, and stormwater run-off, the proposed activities aim to address the barriers of weak coordination and collaboration that have hampered actions that address the increasing and recurrent challenge of managing flood and landslides in urban areas.

Past and ongoing efforts of public and private sector on climate adaptation. Rwanda's Green Fund, FONERWA, led the development of the Strategic Programme for Climate Resilience (SPCR), which aimed to enhance and stimulate private sector engagement to drive multi-sectoral, climate-responsive investment in Rwanda. Programme 3 of the SPCR focused on Climate Resilient Human Settlements and included components that overlap with the proposed activities including: 1) mainstreaming climate resilience into urban land use planning, 2) climate resilient stormwater management and drainage, 3) climate resilient waste management, and 4) sustainable, resilience-building transport. The programme was identified as an area of need, potential investment, and private sector engagement by the GoR; however, the SPCR did not advance to funding.

Previous GEF Approved projects

- Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in Flood Prone Areas (2010–2015)
- Landscape Approach to Forest Restoration and Conservation (LAFREC) (2014–2019)
- Building Resilience of Communities Living in Degraded Wetlands, Forests and Savannas of Rwanda through an Ecosystem-based Adaptation Approach Project (2015–2020; delayed by two years)
- Integrated Management of Critical Ecosystems (2005–2010)
- Increasing the Capacity of Vulnerable Rwandan Communities to Adapt to Adverse Effects of Climate Change: Livelihood Diversification and Investment in Rural Infrastructures (2015–2019)
- Forest Landscape Restoration in the Mayaga Region (2016–2021; recently approved)

Other complementary GCF grants or funding proposals. Significant investment has been made in adaptation planning, readiness, and capacity strengthening through complementary GCF grants and funding proposals. However, more targeted coordination and adaptation planning support is required in the areas of flooding and landslide resilience capacity. Furthermore, the proposed activities aim to build upon the past GCF readiness funding, complement the GCF funding proposal on strengthening climate resilience of rural communities in Northern Rwanda, and bridge gaps and areas of critical need between the existing mandates and competencies of GoR institutions as well as coordination between national and sub-national entities responsible for disaster risk management, planning, and resilience. Through the effective coordination, multi-stakeholder engagement, and integrated management, the proposed activities aim to harness the collective strengths of key actors within the GoR to address the fragmentation and poor coordination that has thus far hampered effective flooding and landslide management, resilience, and prevention.

Figure 6: List of existing GCF/GEF grants and adaptation projects in Rwanda under bi- and multilateral climate funds

Existing and Approved Projects	**GCF Funding Proposal FP073: Strengthening climate resilience of rural communities in Northern Rwanda (2018-2024)**	**GCF Readiness Approved Project: Readiness and preparatory support to implement Green City Development Projects in Rwanda's Secondary Cities (2017-2018)**	**GEF Approved Project: Building the capacity of Rwanda's government to advance the National Adaptation Planning process (2019-2023)**	**GCF Proposed Project: National Adaptation Readiness and Preparatory Support for Building Flood Resilience Capacities in Rwanda**
Geographic Areas of Focus	Gicumbi District in Northern Rwanda, sub-catchment areas of the Muvumba watershed	Huye, Muhanga, Rubavu, Nyagatare, Rusizi, Musanze	Rusizi, Gasabo, Nyagatare and Kirehe Districts	Rwanda's built environment
Activity Focus	Climate-resilient agriculture; sustainable forest management; climate resilient settlements	Forestry, eco-tourism and conservation in urban areas; sustainable transport systems; green energy infrastructure development and utilities; recreational green spaces	Strengthening national adaptation, coordination, and capacity building of Meteo Rwanda, Ministry in Charge of Emergency Management, and Ministry of Agriculture and Animal Resources (MINAGRI)	National (and sub-national) coordination for built-environment planning and development; disaster risk reduction; urban infrastructure; integrated land-use and spatial planning

Name of project	**Fund**	**Year approved**
Enabling Activities to Facilitate the Preparation of a National Adaptation Plan of Action (NAPA)	Least Developed Countries Fund (LDCF)	2004

Budget Support from the Global Climate Change Alliance (GCCA) for Environment and Natural Resources in Rwanda: Ensuring food security through a land tenure reform	Global Climate Change Alliance (GCCA)	2009
Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in Flood Prone Areas	LDCF	2009
Post-harvest Agribusiness Support Project	Adaptation for Smallholder Agriculture Programme (ASAP)	2013
Increasing the adaptive capacity of natural systems and rural communities, living in exposed areas of North Western Rwanda, to climate change impacts	Adaptation Fund (AF)	2013
Building Resilience of Communities Living in Degraded Forests, Savannahs and Wetlands of Rwanda Through an Ecosystem Management Approach	LDCF	2013
Sector Reform Contract (SRC) to promote climate-proof investments by farmers through improved land administration and land use monitoring capacities at central and local government level	GCCA	2014
Increasing the Capacity of Vulnerable Rwandan Communities to Adapt to Adverse Effects of Climate Change: Livelihood Diversification and Investment in Rural Infrastructures	LDCF	2014
Technical Assistance Grant for Environmental and Social Policy (ESP) and Gender	AF	2016
Adapting to Climate Change in Lake Victoria Basin	AF	2017

The activities proposed in this NAP project would build upon existing capacities within the respective GoR institutions while addressing gaps in coordination, capacity, and systems for monitoring and evaluation for multi-stakeholder engagement on integrated water resources management for urban climate resilience. The proposed NAP would also aim to build synergies with the private sector and identify missed opportunities for rainwater harvesting[20], water retention, and nature-based solutions to address the challenges of rapid urbanization.

[20] Current research estimates that in 2016, the retention of only 30% of stormwater run-off during the rainy season would have been sufficient to meet irrigation requirements during the subsequent dry season. Karamage, F., (2017) Modeling Rainfall-Runoff Response to Land Use and Land Cover Change in Rwanda (1990-2016).

3. LOGICAL FRAMEWORK AND IMPLEMENTATION SCHEDULE

Outcomes		Baseline[21]	Targets	Activities[22] (brief description and deliverables)	Anticipated duration: 24 months Monthly implementation plan of activities[23]																							
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Outcome 1: Capacity and coordination strengthened for main institutions to effectively mitigate floods and prevent landslides	Sub-Outcome 1.1: AE, NDA, other relevant central institutions and local governments have the capacity and coordination mechanisms to support City of Kigali and at least 4 urban areas experiencing rapid growth and high vulnerability to floods and landslides	1 Water for Growth Rwanda Catchment Maps MIDIMAR (2015), The National Risk Atlas of Rwanda	2 The proposed activity will build on the catchment maps that are available, the National Risk Atlas of Rwanda and will develop methodology to identify at least 4 urban areas outside the city of Kigali that experiencing rapid growth and highly vulnerable to floods and landslides	Activity 1.1.1: Identification and prioritization of at least 4 urban areas experiencing rapid growth and high vulnerability to floods and landslides outside of the City of Kigali for intervention Deliverable 1.1.1: Methodology developed, and priority areas selected by the Project Steering Committee in consultation with the Technical Advisory Group and Project Working Group.		X																					
		0 1. The baseline is considered as zero because, most of the adaptation work carried out in the past was focusing on rural areas and a capacity needs assessment to identify gaps and priorities needs to be carried out cutting across all relevant	1 1. The proposed activity will deliver a capacity needs assessment and identify gaps and priorities related to effective mitigation of floods and landslide prevention in urban areas. 2. The proposed activity will also identify the	Activity 1.1.2: Conduct capacity needs assessment to identify gaps and priorities related to effective mitigation of floods and landslides prevention. Deliverable 1.1.2: Capacity needs assessment conducted, gaps and priorities identified in a report.			X																				

[21] For baselines rated at 1 or 2, please shortly 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 2.

[22] Please include tangible and specific deliverables for each activity proposed, and the timeframe (month number) in which it will be delivered to GCF. Please note that during implementation all deliverables should be included within the implementation reports for GCF consideration.

[23] If the duration of the proposal is longer than 24 months, please change the monthly columns to indicate 2 or 3 months each (e.g. change month "1" to month "1-2' or "1-3").

		institutions related to urban areas. 2. National Coordination Team (NCT) revitalized with the Private Sector Federation (PSF) serving as co-chair[24]	capacity needs assessment of the private sector[25] to maximize their involvement																									
		0 Deliverable 1.1.2 will provide a baseline for this activity	1 1. The proposed activity aims to develop and implement a 2-year workplan to build capacities of at least 300 staff and stakeholders to effectively mitigate floods and prevent landslides 2. Of the 300 stakeholders that are planned to be trained at least 10% of the stakeholders are from the private sectors (drawing 90% of the members from the Technical Advisory Group[26])	Activity 1.1.3: Based on results from the capacity needs assessment (activity 1.1.2), develop and implement 2-year work plan to build capacities of AE, NDA, other relevant central institutions and local governments to effectively mitigate floods and prevent landslides Deliverable 1.1.3: 300 staff and stakeholders trained on effective flood mitigation and landslides prevention.					X					X					X					X				

[24] This was one of the outputs of the GCF Readiness project "Readiness and preparatory support to implement Green City Development Projects in Rwanda's Secondary Cities" (2018-2019) which included reconstitution of the NCT members representing varied sectors, training program to NCT members, field visit to project sites, learning by reviewing proposals submitted to international donors seeking mitigation and adaptation climate finance. Few results include design of new proposal approval templates, allocation of known focal points within sector to review proposals among others.

[25] The private sector here includes Architects, Engineers, Urban planners, Environmental practitioners, infrastructure design professionals, association of contractors, and allied professionals engaged in building flood and landslide risk resilience in urban areas

[26] A dedicated private sector led Technical Advisory Group (TAG) will be set up for the implementation of this project drawing members from Architects, Engineers, Urban planners and contractors association. The proposed board will be providing guidance on the implementation especially for matters concerning the private sector and will also be part of the capacity building programs.

	Sub-Outcome 1.2: Institutional and regulatory framework strengthened to effectively and gender-responsively mitigate floods and prevent landslides	1 Rwanda plans to establish National Framework for Climate Services (NFCS), a national coordinating mechanism for facilitating the development and delivery of climate services, to better manage climate risks at all levels, through development and incorporation of science-based climate information and prediction services into planning, policy and practice. A national consultative workshop was organized in December 2017 that brought together experts and stakeholders from various agencies and institutions, with a goal to improve and sustain the flow, co-production and delivery of user-salient climate information. The Rwanda NFCS will be led by the Rwanda Meteorology Agency (Meteo Rwanda), a government agency under the Rwanda Ministry of Environment (AE)	2 The proposed activity will build on the planned operationalization of Rwanda NFCS to develop a coordination framework to effectively coordinate, implement, monitor, evaluate and report on flood mitigation and landslide prevention interventions	Activity 1.2.1: Develop cross-sectoral coordination framework to effectively coordinate, implement, monitor, evaluate and report on flood mitigation and landslide prevention interventions. Deliverable 1.2.1: Cross-sectoral coordination framework developed.																									

		0 Deliverable 1.2.1 will provide a baseline for this activity	1 The proposed activity aims to build capacities of at least 100 stakeholders to acquire managerial skills to coordinate and implement the framework. Ensure at least 10% of the stakeholders are from the private sector.	Activity 1.2.2: Based on the cross-sectoral coordination framework (activity 1.2.1) staff from AE, NDA, relevant central institutions, local government and private sector members of the relevant sector working groups acquire managerial skills to coordinate and implement the framework Deliverable 1.2.2: 100 members representing AE, NDA, relevant central institutions, local government and private sector members of the relevant sector working groups trained and coordination framework integrated in their workplan							X								X								
		0	1 Gender assessment and action plan highlighting at least 50% of beneficiaries are women and girls vulnerable to climate risks.	Activity 1.2.3: Conduct a gender assessment to better incorporate gender-based vulnerabilities of climate risks, especially floods and landslides, as well as women's needs and positive contributions to adaptation and disaster risk reduction and management. Deliverable 1.2.3: Gender assessment and action plan to guide gender mainstreaming throughout the project.			X			X																	

Outcome 2: Appropriate technical studies identified and prioritized, climate finance strategies and project pipeline strengthened for effective storm water and landslide management in Kigali City and urban areas experiencing rapid growth and highly vulnerable to floods and landslides outside Kigali city	Sub-Outcome 2.1: Slope management systems improved in 5 key zones for risk reduction in Kigali and other rapidly urbanizing cities.	1[27]	2	Activity 2.1.1: Conduct detailed landslide risk assessment and prevention studies for at least 5 high risk zones in Rwanda including Kigali Deliverable 2.2.1. Detailed landslide risk assessment and prevention studies for at least 5 high risk zones developed			X							X															
	Sub-Outcome 2.2: Improved storm water management through run-off reduction strategies	0 Rwanda Building Code 2019 and Annex 3 Rwanda Green Building Minimum Compliance System Mandates Rainwater Harvesting in all public buildings	1 The proposed activity builds on the Rainwater Harvesting (post-construction) indicator of Rwanda Green Building Minimum Compliance Guidelines and aims to develop runoff reduction guidelines for both pre-construction and post-construction phases	Activity 2.2.1: Develop runoff reduction guidelines for pre-construction and post-construction phases of built environment linked to spatial planning and construction practice Deliverable 2.3.2: Runoff reduction guidelines developed											X	X												
				Activity 2.2.2: Develop implementation plan for runoff reduction guidelines Deliverable 2.3.3: Implementation plan available to be used by the mandated agencies													X	X										
	Sub-Outcome 2.3: Concept notes and financing strategy developed for local climate action in prevention of flood and landslides	0	5	Activity 2.3.1: Develop at least 5 concept notes on implementation of flood mitigation and landslide prevention local actions Deliverable 2.3.1: 5 concept notes available and development																					X			X
				Activity 2.3.2: Develop financial model for the identified concept notes (activity 2.3.1) to mobilize																						X			X

[27] Landslide high risk zones identified in city of Kigali.

				domestic and international investments in flood mitigation and landslide prevention actions Deliverable 2.4.3: Concept notes' (under 2.4.1) financial model developed																								
	Sub-Outcome 2.4: Improved landslide and storm water management in urban areas experiencing rapid growth and high vulnerability to floods and landslides	0 MIDIMAR (2015), The National Risk Atlas of Rwanda Assessment of Climate Change Vulnerability in Rwanda – revised by REMA in 2018	1	Activity 2.4.1: Conduct assessment of current storm water management and landslide management in at least 4 urban areas identified outside Kigali city and are experiencing rapid growth and high vulnerability to floods and landslides Deliverable 2.5.1: Assessment conducted.			X											X										
Outcome 3: Knowledge management, information sharing, and communications strengthened to effectively mitigate floods and prevent landslides	Sub-Outcome 3.1: Rwanda's medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs identified	0 Planned revision of Rwanda's GGCRS 2011	1	Activity 3.1.1: Formulation of Rwanda's National Adaptation Plan (NAP) by building on the planned revision of Rwanda's Green Growth and Climate Resilient Strategy (GGCRS, 2011) i) Assess available information, resources, programs and projects ii) Map stakeholders iii) Analyze gaps and needs iv) Identify development-adaptation objectives v) Define governance and coordination vi) Assess climate risks and vulnerability vii) Identify adaptation options to address key vulnerabilities and integrate adaptation in development planning viii) Prioritize adaptation options.	X																X							

				Consultation and validation workshops will be undertaken throughout the NAP development process including with sectoral and subnational stakeholders. Deliverable 3.1.1: NAP developed																								
	Sub-Outcome 3.2: Post-floods and landslides response and recovery efforts available	0	1	Activity 3.2.1: Developing a knowledge base on disaster management strategies arising from post-floods and landslides response and recovery efforts Deliverable 3.2.1: Post-floods and landslides response and recovery efforts case studies, strategies and techniques relevant to Rwanda context																X			X					
	Sub-Outcome 3.3: Increased awareness through workshops for stakeholders and local communities in all flood and landslide prone areas	0	1	Activity 3.3.1: Conduct awareness raising workshops for stakeholders and local communities in all flood and landslide prone areas Deliverable 3.3.1: Materials developed in local language and 20 awareness workshops conducted in Kigali city and urban areas outside Kigali city (outcome 3)																			X				X
		0	1	Activity 3.3.2: Subscribe for TV and Radio show to increase NDA awareness and outreach through media and outreach	x																						X
Outcome 4: Mechanisms for Reporting, Monitoring and Review of adaptation and resilience planning progress developed to	Sub-outcome 4.1: Monitoring and evaluation framework of adaptation and resilience planning established	0	1	Activity 4.1.1: Develop mechanisms to monitor and evaluate adaptation and resilience planning progress focusing on flood and landslides Deliverable 4.1.1: Monitoring and																X	X						

gather lessons and integrate them into future iterations of the identified flood mitigation and landslide management planning process				evaluation framework available																							
	Sub-outcome 4.2: Indicators and methods for monitoring and review of adaptation, readiness and resilience of built environment defined.	1[28]	2	Activity 4.2.1: Develop indicators and data collection methods for monitoring and review of adaptation, readiness and resilience of built-environment. The indicators and methods will be integrated with the Master Plan Implementation and entered into the RBME portal for the environment sector Deliverable 4.2.1: Indicators and data collection methods for monitoring and review available and integrated with Master Plan implementation and RBME portal								X								X							
		0	1	Activity 4.2.2: Conduct technical capacity enhancement programs for staff to monitor and review resilience planning Deliverable 4.2.2: M&E staff trained to monitor and review using RBME system																	X						

[28] RBME portal developed and in place. Results-based Monitoring and Evaluation System (RBME) portal has been developed and is in place. The RBME is managed by the Ministry of Environment to monitor, track, and facilitate harmonized reporting of indicators of the environment and natural resources (ENR) sector encompassing multiple agencies.

4. ADDITIONAL INFORMATION (ONLY FOR ADAPTATION PLANNING SUPPORT)

The Government of Rwanda has recently launched their next cycle of medium-term national development plan titled the "National Strategy for Transformation (NST1)" 2018 to 2024 which envisages the building of a prosperous nation with the ambition of becoming a middle-income country. Rwanda's disaster related risk analysis shows that the economic impact of recurrent flooding and landslides threatens the achievement of the goals set out by the NST1.[29] The combination of repeated extreme weather events and the location of vulnerable communities in at-risk zones has contributed to loss of life and destruction of critical infrastructure including schools, hospitals, roads, and homes. In response, the government has created a new Water Resources Board in November 2018 with the aim of harmonizing all water-related activities. The Cabinet at the same time dissolved the existing Ministry of Disaster Management and Refugee Affairs (MIDIMAR) to form a new Ministry in charge of Emergency Management (MINIEMA) to strength the response needed to address the challenges related to emergency management (of which flood and landslides are priorities).

In 2017, the Government of Rwanda also launched the National Framework for Climate Services (NFCS). The body is currently undergoing review to identify action plans and to develop a legal framework. The NFCS is led by Meteo Rwanda and aims to convene all users of climate data. While there have been significant efforts to link users of climate data at the national level, there is significant capacity building and awareness raising required at the district level. Furthermore, the NFCS – though involving all users and generators of climate data – is funded by the Rwanda Climate Services for Agriculture project led by the International Center for Tropical Agriculture (CIAT). There is a significant emphasis on drought adaptation aimed at data usability and accessibility for farmers (both in rural and urban areas); however, there have not been similar, comparable efforts to address the built environment. The proposed activities would address both of these gaps (lack of capacity at the district-level and relatively greater emphasis on climate services for agriculture) to better prepare areas in flood and landslide prevention and preparedness for the built environment. While there has been adaptation planning and implementation results from the 2006 NAPA, most of these has been directed to agriculture, forestry, and biodiversity with minimal interventions in the built environment even though there has been a rapid urbanization rate.

The project is addressing multiple government ministries that are engaged in mainstreaming, responding and preventing the challenges of flooding in urban areas beyond the Rwanda Water and Forestry Authority (RWFA) to the ministry of Infrastructure, Agriculture and Environment. Past emergency measures have shown government's willingness to coordinate budgetary allocation from the different ministries and agencies to respond to flooding. However, these responses have been more ad-hoc and this NAP project will strengthen the evidence to support a broader public policy and decision-making approach to budgetary and investment to build climate resilience of the national government at large. The proposed implementation will look at activity level analysis that will focus on public investment by carrying out a quick investment Flow Analysis of government budgets that will show the gaps to meet the threshold for adaption and resilience to climate impacts in the areas of flooding and landslides as case examples

The government of Rwanda has developed different policies and plans to address the urbanization and built environment related policies in the succeeding years after 2006 NAPA.

- In 2009, the government developed and adopted the National Human Settlement policy;
- The National Urbanization Policy was reviewed in 2015
- In 2013 Kigali Master Plan was developed and revision started in late 2018.
- In 2015, National Roadmap for Green Secondary Cities Development was developed and adopted in 2016
- The 6 Secondary Cities master plans have been revised by the government with support from GCF Readiness Project in 2018. The NAP Readiness builds on the ongoing GCF Readiness implementation ending in July 2019
- An Extraordinary Cabinet meeting approved on 9th November 2018 the establishment of a Water Resources Board whose mandate would be to coordinate various stakeholders involved in water sector with special focus on the implementation of the management of water resources at a catchment level which addresses most of the negative impacts on water resources.

[29] The Ministry of Environment has recently estimated that the effects of extreme weather cost as much as 10% of the national budget. Nkurunziza. M. (2019). Extreme weather costs 10% of national budget – Biruta. *The New Times*: Kigali.

All these policies to a great extent, shows the focus given to issues related to urbanization in relation to flood resilience and adaptation in Rwanda.

Figures below demonstrate the substantial adverse effects of recurrent flooding and landslides have had in recent years in terms of damage to infrastructure, loss of life, and economic impact in multiple locations as well as mapping of observed landslides versus areas of landside susceptibility.

Figure 7: Recent Floods and Landslides in Rwanda[30] (Nsengiyumva. J., et al. 2018 Landslide Susceptibility Assessment Using Spatial Multi-Criteria Evaluation Model)

Time	Place/Venue	Deaths and Injuries	Other Damages
April 2017	Muhanga/South	6 deaths and 27 injured	55 houses destroyed
May 2016	Gakenke/North	35 deaths and 26 injured	67 roads and 29 bridges
May 2016	Muhanga/South	8 deaths and 13 injured	5 roads damaged
May 2016	Rubavu/West	4 deaths and 5 injured	2 bridges destroyed
May 2016	Ngororero/West	13 deaths and 27 injured	4 classrooms destroyed
April 2015	Ngororero/West	10 deaths and 13 injured	24 houses destroyed
March 2013	Nyarugenge/Kigali	4 deaths and 3 injured	87 houses destroyed
April 2013	Gasabo/Kigali	3 deaths and 7 inured	56 houses destroyed
May 2013	Rulindo/North	12 deaths and 7 injured	79 houses destroyed
May 2013	Rutsiro/West	5 deaths and 2 injured	22 houses destroyed
May 2011	Nyabihu/West	14 deaths and 11 injured	300 houses destroyed

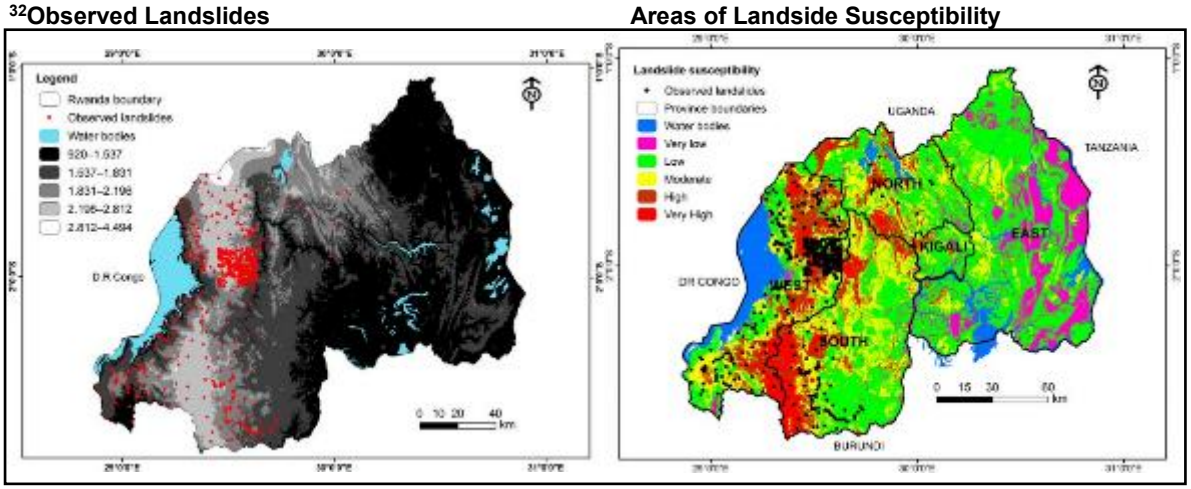
Figure 8: Economic Impact of Recurrent Flooding in Rwanda (UN Office for Disaster Risk Reduction 2019)[31]

Impact	Cost	Source
Economic Impact	13 million USD lost due to flooding; 30 million USD lost from drought	UN Office for Disaster Risk Reduction – Rwanda Country Profile
GDP Loss	0.5% of GDP each year	UN Office for Disaster Risk Reduction – Rwanda Country Profile
People Affected	12,000 (mostly in Western and Southern Provinces)	UN Office for Disaster Risk Reduction – Rwanda Country Profile
Prevention (City of Kigali)	1.5 billion RWF (1.68 million USD) each year to prevent flooding	Survey (2015), Reported by The New Times
Cost (City of Kigali)	Loss of 178.2 million RWF (200,027 USD) annually	Survey (2015), Reported by The New Times

[30] Nsengiyumva. J., et al. (2018). Landslide Susceptibility Assessment Using Spatial Multi-Criteria Evaluation Model in Rwanda, *International Journal of Environmental Research and Public Health,* 15(2):243, January 2018.
[31] UN Office for Disaster Risk Reduction – Rwanda Country Profile

Figure 9: Observed Landslides versus Areas of Landside Susceptibility (Nsengiyumva. J., et al. 2018 Landslide Susceptibility Assessment Using Spatial Multi-Criteria Evaluation Model)

[32]Observed Landslides **Areas of Landside Susceptibility**



The main causes of flooding for each area (sub-catchment) have been inventoried by the Ministry of Environment in the last decade and these are known to be caused by several factors including: lack of adequate storm water management infrastructure, lack of adequate drainage systems, erosion in areas with steep slopes, dumping of solid waste that clogs culverts, limited rainwater harvesting systems and improper land use both for agriculture and urbanization. Moreover, at-risk areas and potential economic impact of climate-related disasters have been identified by the National Risk Atlas of Rwanda.[33] However, efficient coordination amongst key stakeholders remains a challenge.

Proposal complementarity with previous adaptation planning. This proposal aims to address areas of urgent need to strengthen and coordinate national adaptation planning processes to address recurrent heavy rains, flooding, landslides, and road run-offs.[34] This project builds upon existing NAP activities to ensure alignment and complementarity. Previous NAPs have focused on natural resources specifically in the areas of agriculture, forestry and on early warning systems. However, comparable adaptation planning has yet to be carried out for the built environment. Furthermore, previous studies in relation to national adaptation planning demonstrate persistent lack of capacity and limited knowledge sharing in areas required to bridge the divide between early warning systems and the response measures when it comes to flood and landslide-related emergencies. As a result, effective coordination among key stakeholders remains a challenge.

With regards adaptation action 2) Setting up an information system and early warning hydro-agro meteorological system and rapid intervention mechanisms; the following progress has been made under the project titled 'Reducing vulnerability to climate change by establishing early warning and disaster preparedness systems and support for integrated watershed management in flood prone areas' implemented under LDCF 1 with a specific project objective to reduce vulnerability of the Gishwati ecosystems and its associated Nile-Congo crest watersheds, and the people that derive their livelihoods from it, to increased floods and droughts due to climate change. Partners of the project include Meteo Rwanda, Ministry in charge of Emergency Management (MINEMA), Nyabihu District, Ngororero District, Rutsiro District, and Rubavu District. Some of the results of the project include:

1. Establishment of modern and fully functional EWS in 4 districts and necessary human capacity and institutional mechanisms to support the system. Automatic weather stations were also installed countrywide at 22 locations in other districts outside of LDCF area.

[32] Nsengiyumva. J., et al. (2018). Landslide Susceptibility Assessment Using Spatial Multi-Criteria Evaluation Model in Rwanda, *International Journal of Environmental Research and Public Health,* 15(2):243, January 2018.
[33] MIDIMAR (2015). National Risk Atlas of Rwanda. Ministry of Disaster Management and Refugee Affairs: Kigali.
[34] MINIRENA (2016). National Rainwater Harvesting Strategy. Ministry of Natural Resources: Kigali.

2. LDCF trainings conducted together with REMA, and the assessment of District Development Plans (2013-2018) conducted for all 30 districts, indicate that climate change activities has been integrated in District Development Plans and Climate Change is being reflected in annual action plan and annual performance contract.

3. Rwanda Climate Change Portal is hosted and maintained by REMA Department of Climate Change and International Obligations.

Although the project was focusing on the Gishwati ecosystems in the 4 districts of Nyabihu, Ngorogoro, Rutsiro and Rubavu the current proposal will build on the above efforts by focusing on building flood resilience capacities in urban areas of Rwanda through learning lessons and best practices such as:

1. Understanding the scope of the installed fully automated weather station with automated data collection system, data processing, and availing timely and very useful of meteorological forecasting and its applicability in urban areas of Rwanda prone to flood and landslides

2. Understanding the automated data processing and plotting (mapping) of weather symbols and reduced time for data collection and analysis from the perspective of its usefulness in urban areas of Rwanda and building on these efforts.

3. Understanding of the established forecasting protocol that has been built in collaboration with UK met office to have more accurate forecast at District level and probability of expected rainfall intensity and expected time of occurrence and its usefulness in urban areas of Rwanda

The proposal will also build on the ongoing World Bank Landscape Approach to Forest Restoration and Conservation (LAFREC) project (P131464) to pursue landscape management for enhanced environmental services and climate resilience in the highly degraded Gishwati-Mukura landscape wherein of the project's sub-component includes improving the technical capacity of hydrologic/ hydraulic assessment and flood forecasting, and develop a fully integrated early warning system (EWS) in an effort to reduce economic losses and risk to life in the flood-prone 286 Sq.km Sebeya River Basin.

Proposal alignment with previous studies and needs assessments. This project aims to draw upon existing baseline studies and data to strengthen the resilience of vulnerable communities especially in the high-growth, high-risk locations in the City of Kigali and other areas of the country. **Outcome 1** will be achieved through improving flood and landslide risk knowledge as well as preparedness and emergency response mechanisms. The outcome 1 and the related sub-outcomes of this proposal will be delivering these interventions with the institutions in charge both at the national and sub-national level as well as gender-responsive interventions in mind.

The technical studies from this proposal (**Outcome 2**) as well as from other ongoing work, most notably Nordic Development Fund (NDF)'s 'Rwanda – Kigali Flood Control and Integrated Urban Catchment Management' will prepare a portfolio of climate change project concept notes and a financing strategy for flooding and landslide prevention in Kigali City and other parts of the country as outlined in Outcome 2 and the related sub-outcomes. The studies are crucial to address the gap in tackling the challenges of flood and landslide with the catchment and sub-catchment areas in Kigali City where majority of past interventions have been carried out in an isolated and non-integrated manner. For example, a reasonable early warning information shared from the Meteo Rwanda should have the commensurate response to at least avert the loss or damage experience during the rainy season. Moreover, the project component and activities will eliminate the duplication of multiple studies and activities being executed on the same locations. The project will minimize duplication of efforts and ensure that projects that are already commissioned but have not begun will receive the necessary resilience and climate sensitive analysis that will ensure that implementation is sustainable when completed as shown in **Outcome 3** and the related sub-outcomes to improve sustainability.

Lastly, information is currently available, but disaggregated across various institutions and agencies and (as demonstrated in Figure 5) are often unpublished[35] and not shared amongst key stakeholders**.** This NAP readiness project will also document past cases of lessons learnt from managing flooding and landslides to produce a comprehensive repository as well as guidelines for future reference. **Outcome 4** will target high-risk areas in Kigali and the other areas of Rwanda to strengthen national preparedness, awareness and capacity required to address critical needs areas for the overall improvement of flood and landslide management practices of actors at both the national and sub-national levels, creating knowledge for flood and landslide preparedness as stated in Outcome 4 and the related sub-outcomes. The importance of ensuring that Outcome 4 and the related sub-outcomes targets the specific growth but high-risk areas in Kigali City and the other parts of the country is evident in the challenges faced by the first responders to flood and landslide emergencies where the (lack of) knowledge of the location and the terrain plays a critical role in providing solutions prior to and post emergency. There is also the technical element of differentiating weather induced versus human activities induced landslides or both when designing the decision-making protocols for preparedness.

The Least Developed Countries Fund (LDCF) 4-year project includes National Climate Change Vulnerability Assessment and implementing projects. In 2011, the Government of Rwanda adopted the Green Growth and Climate Resilience Strategy and the National Strategy for Climate Change and Low Carbon Development. The GCF NAP will develop tools and capacity to address the immediate need for reducing vulnerability and increasing capacity to adapt in areas of most risk. According to the Third National Communication (TNC) under the United Nations Framework Convention on Climate Change (UNFCCC), the main technical and capacity constraints and gaps identified was the low level of knowledge, skills and awareness of the climate change issues among the national stakeholders, common objectives and clear roles for each of the stakeholders (page 182). Continuous capacity building for Districts in knowledge, skills, methodologies, and measures to support the most affected and vulnerable communities are needed. Coordination between government agencies in climate change, NGOs and Private Sectors should also be enhanced. The proposal supports capacity development at national and district level, provision of tools for increasing the adaptive capacity and preparedness. The project is developed under the GGCRS that aims at climate change adaptation and mitigation, but also to increase non-farm employment, which was identified in the NAPA.

Proposed Theory of Change (ToC). The key barriers and gaps to flooding and landslide risks in Rwanda as shown in the ToC below affects the country's ability to deal with the impacts of climate change. The immediate impacts as already experienced in recent past are the loss of lives, damage to property and deterioration of the livelihood of the people, undermining Rwanda's climate resilient green growth ambitions.

The proposed activities and outputs will bridge these gaps through gender-responsive planning, capacity development and coordination, identification and prioritization of technical studies, climate finance strategies and concept notes with project pipelines. The outputs will be documented, and knowledge shared with proper mechanisms established for monitoring and reporting. These will effectively facilitate the related sectors or agencies to coordinate between the national and sub-national level entities on disaster preparedness and climate resilience in urban areas.

The proposed activities, outputs and outcomes will aim to strengthen coordination by streamlining the activities of key stakeholders while building on existing policies, guidelines, strategies, and projects. The coordination will be carried out under the overall guidance of the Project Steering Committee (PSC) with regular consultations and inputs from the Technical Advisory Group and the Project Working Group. The proposed activities such as development of cross-sectoral coordination framework and building the capacity of staff to coordinate and implement the framework are aimed to improve multi-stakeholder cooperation and inter-ministerial coordination. Also, the proposed activities such as conducting a capacity needs assessment, developing and implementing a 2-year workplan to building capacity of relevant stakeholders, and conducting a gender needs assessment to better incorporate gender-based vulnerabilities will strengthen the role of institutions and improve coordination between national and sub-national entities on climate resilience in urban areas. The coordination between the Ministry of Environment (MoE) and Ministry of Infrastructure (MININFRA) is a key objective of the proposed

[35] Storm Water Management for Flood Control in the City of Kigali, Water Resources Management Department and Rwanda Water and Forestry Authority, 2018, (unpublished); Assessment of Current Storm Water Management and Flood in the City of Kigali Areas, MoE, 2018, (unpublished); Report on the Areas Affected by Floods Caused by Heavy Rain in the City of Kigali, CoK, 2018, (unpublished); Nyabugogo Catchment Study: Hydrology and Hydraulics Intervention Detailed Design, (unpublished); Detailed Sub-Catchment Management Plans for Gikondo and Nyabugogo Wetland Systems, REMA, 2018, (unpublished); Mapping of Erosion in Rwanda and Guidelines for Erosion Control, RWFA, 2018, (unpublished); Proposed Guidelines for Mainstreaming Climate Change Adaptation into Environmental and Social Impact Assessment (ESIA) for Road Transport Infrastructure in Rwanda, RTDA, 2018, (unpublished)

activities under this project to incorporate climate-resilient urban planning and to effectively address the urgent need of improved disaster risk management and resilience of the built environment.

To improve the availability of technical studies the project proposes to conduct detailed landslide risk assessment and prevention studies for at least 5 high-risk zones in Kigali city, conduct assessment of current storm water management and landslide management in at least 4 urban areas identified outside Kigali city and develop storm water runoff reduction guidelines. The technical studies will support the development of concept notes to prioritize flood reduction and landslide prevention investments. The proposed GCF NAP will also build synergies with the NDF project activities to ensure that the technical studies are taken forward through the development of concept notes as a part of this proposal.

To strengthen the role of the private sector on issues of resilience and adaptation for flood management the project proposes to build on the revitalized National Coordination Team (NCT) where the Private Sector Federation (PSF) is serving as the co-chair through the recently completed GCF Readiness program. The private sector will also be part of the Technical Advisory Group (TAG) that is aimed to provide a platform for institutional private sector actors (including the Private Sector Federation and Rwanda Development Board) as well as private companies to provide input, coordinate, consult, and inform the Project Steering Committee. In addition, a capacity needs assessment, a 2-year workplan to build capacities and developing skills to coordinate and implement the cross-sectoral coordination framework with specific focus on private sector is being proposed.

To improve access to finance and need to mobilize international and domestic resources the project proposes developing financing models for the identified concept notes. The proposed GCF NAP will also strengthen coordination and build synergies with the NDF project activities to ensure that the prioritized flood reduction investments are taken forward through the development of concept notes and financing models as a part of this proposal.

To raise awareness and capacity of key stakeholders the proposed NAP aims to develop a knowledge base on disaster management strategies on post-flood and landslide response and recovery, conduct awareness raising workshops for stakeholders and local communities in all flood and landslide prone areas through media outreach programs. These activities are aimed at improving adaptation knowledge management, information sharing and strengthening communications.

To strengthen monitoring and evaluation of existing and upcoming interventions the proposed projects aims to develop mechanisms focusing on floods and landslides within the existing frameworks, develop indicators and data collection methods to monitor and review adaptation efforts in urban areas along with technical capacity programs for relevant staff to monitor and review resilience planning.

The result of this will be an integrated adaptation and resilience planning in Rwanda's urban development that leads to building national climate change planning readiness capacities in Rwanda's built environment.

Main assumptions made for the successful completion of the project include the following:

Willingness of different stakeholders involved in national adaptation planning and implementation to actively share information and experience so that duplication is minimized and synergies are maximized. This will be done through constructive interaction within the Project Steering Committee members as well as proactive outreach to other relevant development partners involved in climate adaptation activities.

Linked to the above, willingness to effectively coordinate within national and between national and sub-national entities involved in climate risk adaptation will be necessary. One of the main challenges for effective implementation of such project is lack of concerted and coordinated efforts to ensure both horizonal and vertical alignment and integration in enhancing national adaptation capacity, and in this case, managing flood and landslide risks in key urban areas.

Another assumption that was made is that this NAP Readiness will be well aligned with the NDF, GEF NAP and the GGCRS revision process administered by UNDP in terms of timelines and information flow. This will be addressed through strengthened coordination mechanism built within the project.

Figure 10: Theory of Change

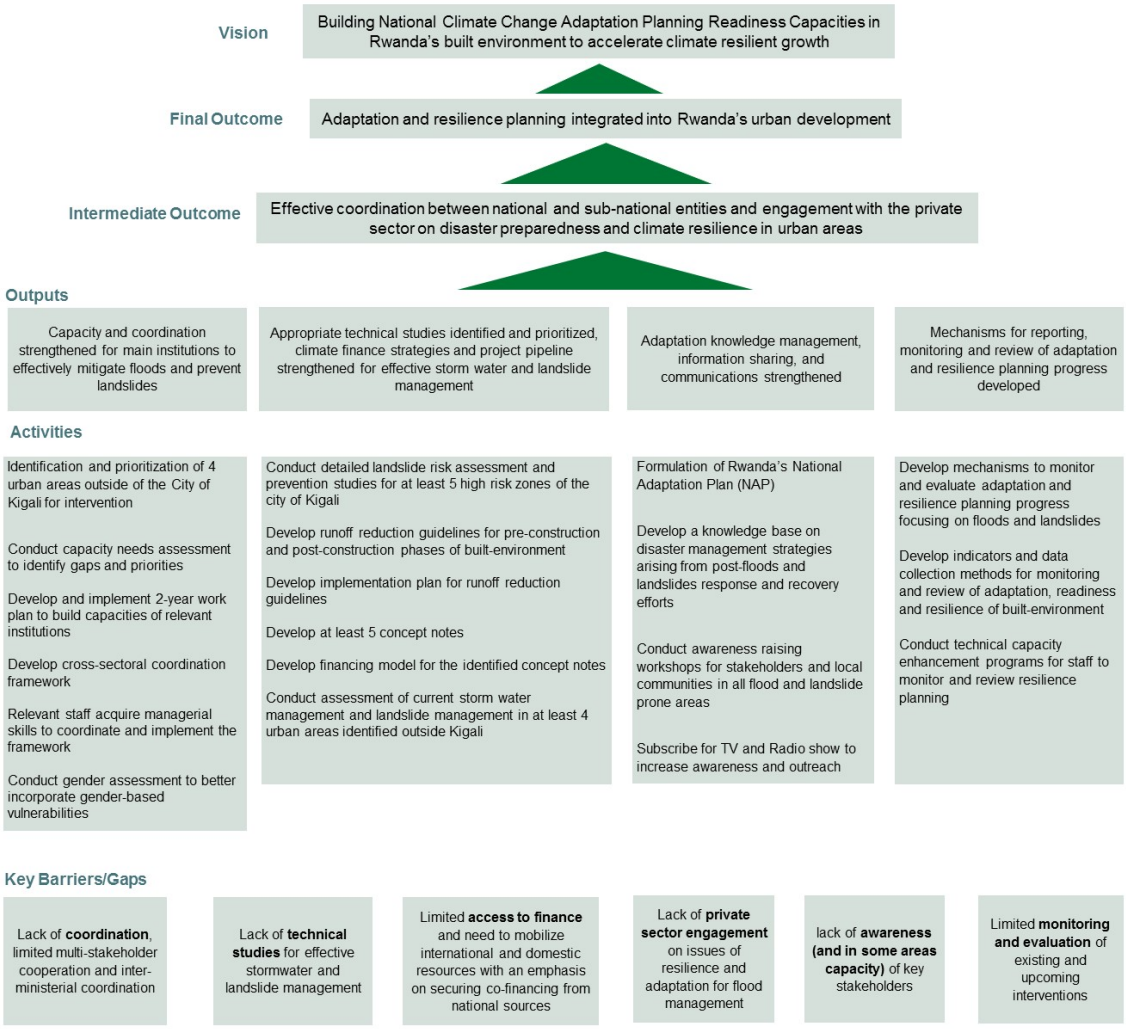
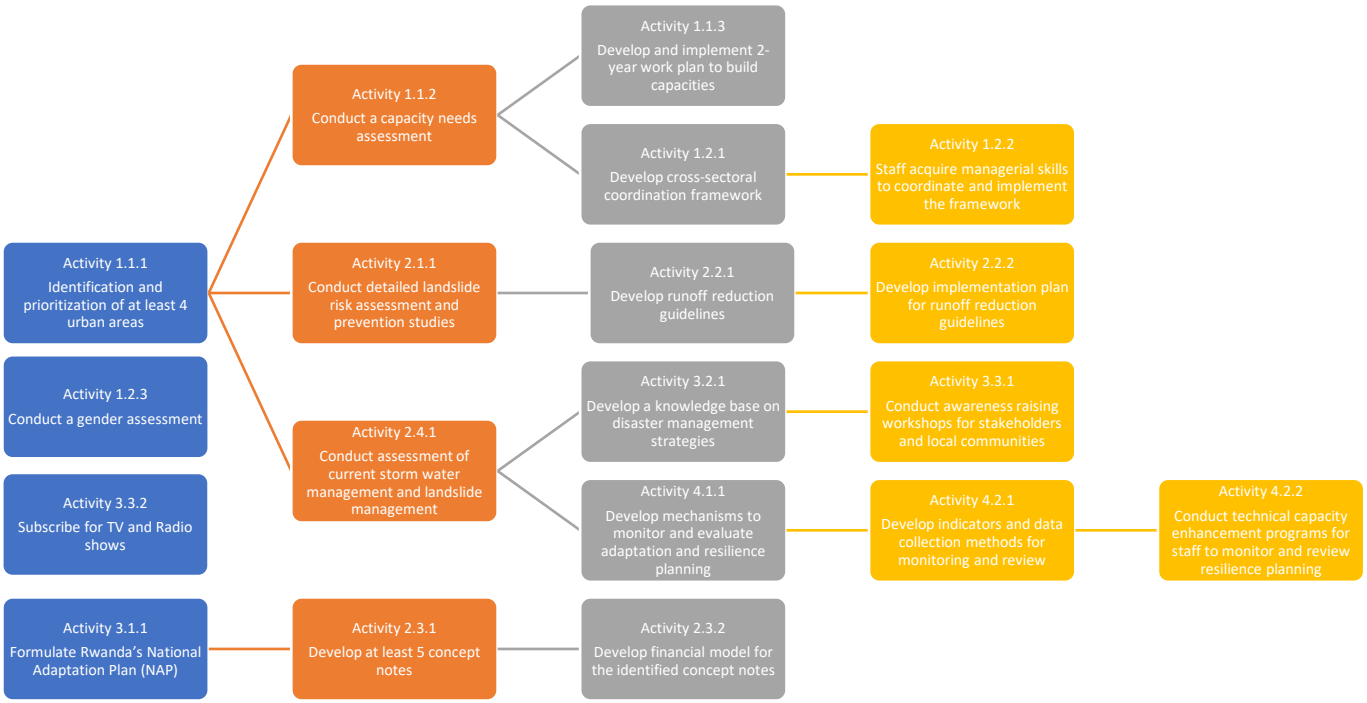


Figure 11: Causal Pathway



5. BUDGET, PROCUREMENT, IMPLEMENTATION, AND DISBURSEMENT

5.1 Budget plan

Please complete the Budget Plan in Excel using the template available in the Library page of the GCF website.
Budget plan attached as Annex 1_Budget Breakdown_Consultancy_PMC_GCF NAP_20200109

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.
Procurement Plan attached as Annex 2_Rwanda _Readiness_Budget_Procurement _GCF NAP_20200110

5.3 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.

The obligations of GGGI include management of personnel, carrying out the procurement activities, fund disbursements, monitoring, evaluation and reporting to GCF.

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**

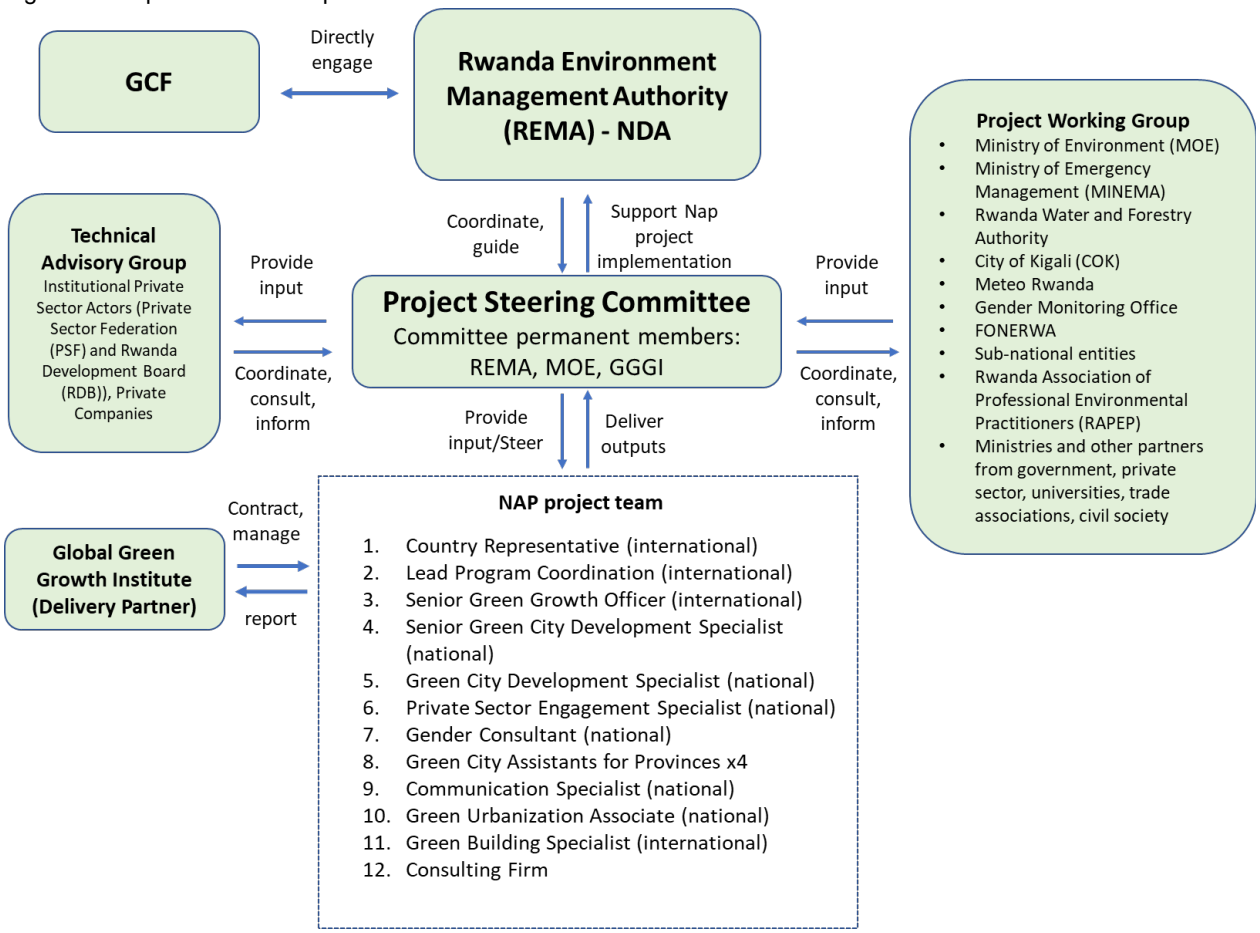
Disbursements will be made in accordance to Clause 4 *"Disbursement of Grants"* and Clause 5 "*Use of Grant Proceeds by the Delivery Partner*" of the Amended Framework Readiness and Preparatory Support Grant Agreement entered into between GCF and Global Green Growth Institute (GGGI) on *13 December 2017*.

6. IMPLEMENTATION ARRANGEMENTS AND OTHER INFORMATION

6.1 Implementation map

Please describe how funds will be managed by the NDA and/or the Readiness Delivery Partner

Figure 12: Implementation Map



The Global Green Growth Institute (GGGI), who has a delivery partner agreement with GCF, is officially nominated by the NDA to be a delivery partner for the execution and day to day management of this NAP readiness fund. GGGI therefore, will be responsible for the overall management of the project once funds are released and will be reporting both to the NDA and the GCF with which it would have concluded a bilateral agreement that will enable it to have administrative communication with the fund. This entails management of personnel, fund disbursements, monitoring, evaluation and reporting to GCF.

GGGI has been selected as the delivery partner for this NAP proposal due to its positioning as an inter-ministerial link between both the Ministry of Infrastructure (MININFRA) and the Ministry of Environment (MoE) as well as its unique structure as an inter-governmental organization. Furthermore, GGGI would ensure linkages and translation of lessons learned from the current GCF readiness activities in the urbanization sector at the sub-national level to the national level, providing a crucial continuation of work on green cities and building upon existing collaboration between the NDA, AE, and secondary cities.

GGGI staff members with areas of expertise in land use planning, urban planning, architecture, and environmental economics have provided technical assistance to the national government and sub-national governments in drafting several key documents and strategies including the District Development Strategies (DDS) for Huye, Muhanga, Musanze, Nyagatare, Rubavu, and Rusizi. In addition, GGGI staff includes green urbanization specialists who have worked extensively in climate change mitigation and adaptation plans of the

built environment and urban centers. These include staff with expertise in spatial planning, land-use policy analysis, and sustainable urban development who can support project activities. Moreover, GGGI Rwanda senior management staff provides on an ongoing basis trusted advisory support to senior government officials (e.g. Ministers, State Ministers, Mayors, and Directors) to ensure robust decision making that factors green growth and climate resilience. 4 Green City Assistants in the Provinces will support project activities in the target locations outside of Kigali.

A Project Steering Committee will be established at the start of the project, chaired by the NDA who will be responsible for the overall decision-making process and ownership of the project development and implementation. As indicated in Figure 11, there will be permanent members of the Project Steering Committee (NDA-REMA, MoE and GGGI) supported by the Technical Advisory Group and the Project Working Groups.

The NDA, in collaboration with the related line ministry or sector, has the convening power to secure consensus on any climate adaptation or mitigation issues. These are done mostly through the existing Sector Working Groups and their thematic platforms.

Project Steering Committee will meet on a quarterly basis. At least 3 staff from NDA responsible for climate adaptation, green economy and climate action at large will be involved in the day-to-day implementation of the project. In addition, NDA staff familiar with the NDF and GEF NAP projects will be part of the Steering Committee to ensure coordination and linkage with these ongoing adaptation activities.

The Project Steering Committee will steer the overall project implementation providing periodic inputs to reports and progress as well as make recommendations when there are needs to make changes to the plan relating to the adaptation planning processes for flooding risks and landslides. The committee will also have oversight to ensure that the project implementation aligns with and complies with existing policies and procedures of government and international rules.

The activities proposed would result in a comprehensive strengthening of urban areas in Rwanda to respond to disaster risks as well as more effective, long-term planning to mitigate climate change effects on urban centers. The activities would result in improved awareness of stakeholders and communities in flood and landslide prone areas, improved slope management, detailed spatial redevelopment plans on storm water infrastructure, and overall improved capacity and coordination of the main institutions responsible for flood management, landslide prevention, and disaster risk reduction.

Figure 13: NAP project team

Position title	**Sub-outcome**	**Description / brief ToR**
Country Representative	Project Management	• Lead the GGGI Rwanda office and manage high-level stakeholder engagement throughout the period of the grant • Provide substantive input into grant-funded activities in the areas of social safeguards, poverty reduction, and gender mainstreaming throughout the project • Past support to the government included inputs to the development of the inclusive growth sections of the National Roadmap for Green Secondary Cities Development as well as the Infrastructure Gender Mainstreaming Strategy
Lead, Rwanda Program Coordination	Project Management	• Initiate and facilitate hiring of consultant and external contractors • Ensure quality assurance of deliverables, timely reporting, and oversee overall grant management • Lead coordination, engagement, and relationships with government counterparts including providing substantive updates and high-level coordination with the NDA • Supported the review of Rwanda's National Urbanization policy ensuring that it aligns with sustainability principles. • Led and contributed to the development of several strategies that supports government's planning processes to mainstream climate change, for example, the mainstreaming of the Green Growth and Climate Resilient Strategy into the District

		Development Plans (DDPs) under the EDPRSII -2013-2018, and the District Development Strategies (DDS) under the NST1 2018-2024. Have provided technical advisory and backstopping to Minister's, Directors and managers within the government on a regular basis
Senior Green Growth Officer	Project Management	• Support grant management, reporting, and documentation. • Support the development of concept notes (5) • Identification of potential adaptation projects in integrated water resources management • Currently embedded within the Ministry of Environment. Supported the revision of the Environment policy in the Ministry of Environment as well as providing technical advisory on the development of Rwanda's green procurement policy
Senior Green City Development Specialist	1.1-4.2	• Conduct capacity needs assessment to identify gaps and priorities related to effective landslides prevention • Analysis of green city development constraints, gaps and recommendations based on the analysis results • Oversee the execution of detailed technical studies providing points of contact and additional information as required to the technical consulting firm selected • Develop concept notes and financing strategy for local climate action in the prevention of flooding and landslides • Build awareness of stakeholders and local communities through workshops in all flood and landslide prone areas • Monitoring and evaluation framework of adaptation and resilience planning established • Capacity building – training of M&E staff • Led the development of the City of Kigali Master Plan and contributes to mainstreaming of green growth into the ongoing revision of the master plans both for Kigali and the 6 secondary cities
Green City Development Specialist	1. 1-4.2	• Support capacity needs assessment to identify gaps and priorities related to effective landslides prevention • Conduct analysis of green city development constraints, gaps and recommendations based on the analysis results • Support the execution of detailed technical studies providing points of contact and additional information as required to the technical consulting firm selected • Support the development of concept notes, project proposals, and financing strategy for local climate action in the prevention of flooding and landslides • Organize and manage all logistics for workshops in all flood and landslide prone areas • Support the establishment of the monitoring and evaluation framework of adaptation and resilience planning established • Support capacity building – training of M&E staff • Supported REMA (GCF NDA) with capacity development and the National Coordination Team (NCT)
Private Sector Engagement Specialist	1.1-4.2	• Conduct stakeholders mapping and capacities assessment of relevant private sector actors • Contribute towards analysis of green city development constraints, gaps and recommendations based on the analysis results • Lead the development of concept notes, project proposals, and financing strategy for local climate action in the prevention of flooding and landslides • Build awareness among private sector actors on potential areas for collaboration on flood and landslide management and investment opportunities

		• Will support the Technical Advisory Group, Rwanda Green Fund (FONERWA) and the related government institutions like MINECOFIN, MINEACOM, and PSF
Green City Assistant (Southern and Western Provinces) x4	1.1-4.2	• Support the organization, participant engagement, content, and delivery of workshops in areas prone to flooding and landslides • Serve as the focal point for district and city-level engagement as well as for awareness raising events in selected area • Supported the District One Stop Centers to integrate green growth principles into their urban planning policies
Communications Specialist	3.2, 3.3	• Develop case studies of post-flood and landslide response and recovery efforts • Support the development of materials on post-floods and landslides response • Support the development of content, logistics, and participant evaluation for 20 awareness workshops conducted in the City of Kigali and other urban areas
Consulting Firm (International)	2.1, 2.4	• Conduct assessment of current storm water management and landslide management in Kigali and at least 4 urban areas identified outside Kigali city and are experiencing rapid growth and high vulnerability to floods and landslides
Senior Green Urbanization Associate	1.1-4.2	• Support grant management, reporting, and documentation • Supervise the Green City Assistants in the Southern and Western Provinces • Oversee/coordinate all work in districts outside of the City of Kigali • Hiring and management of translation firm for the production of materials in local language • Embedded within the urbanization and human settlement unit of MININFRA and supports the policies, strategies on urbanization. Supports the Sector Working Group planning and coordination especially linkage national and sub-national actions
Senior Green Building Specialist	2.1	• Support the development of runoff reduction guidelines for pre-construction and post-construction phases of built environment linked to spatial planning and construction practice • Embedded within the Rwanda Housing Authority and supported the development of the Rwanda Green Building Minimum Compliance standards that has been approved by Cabinet and gazetted as law. Supports RHA with the capacity building of different stakeholders like the building, construction, and housing practitioners to adopt and integrate climate resilience into their project designs and implementation
Senior Administration Associate	Administration Management	• Manage the day to day administration and operation related work of the project, for example, budget and finance records, disbursements, operations all in line with GGGI, GCF, and GoR policies • Deals with tax issues and office operations
Gender consultant	1.2 and throughout the project	• Carry our gender assessment of the project • Develop gender action plan and ensure gender-responsive programming, monitoring and reporting.

The above team will be supported by the experts and the technicians within the NDA as well as the different sectors both at the national and sub-national level.

6.2 Risks, monitoring and evaluation (M&E), and other relevant information

Risks: Risks to the project include the level of organization and coordination required between national and sub-national entities of the Government of Rwanda as well as other stakeholders. Both the probability and impact levels for this risk is medium. The Ministry of Environment has the primary convening authority. The Delivery Partner will work in close collaboration with both the NDA and the Ministry of Environment and Rwanda Water and Forestry Authority (RWFA) to facilitate effective communication and coordination with the key institutions and stakeholders to ensure alignment of objectives and priorities identified in the proposal.

No known environmental or social risks are associated with the proposed activities, hence the probability and impact levels are considered low.

In terms of the potential for money laundering, terrorist financing, or prohibited practices in the proposed activities of the project, the Government of Rwanda has adopted strict measures for monitoring and preventing the misuse of funds. Furthermore, GGGI Rwanda has a decentralized financial management system, which would enable additional oversight and risk mitigation measures. Therefore, the probability and impact levels for financial management risks is considered low.

In the case of project disruption due to natural disaster, conflict, or instability, GGGI operates in over 30 countries and has a regional office hub in Addis Ababa, Ethiopia. Staff are able to work either remotely or from other duty stations during periods of natural disaster, conflict, or instability. Therefore, risks from such disruptions are considered to have low probability and impact.

In terms of risks related to recruitment delays considering the number of consultants that are part of the NAP delivery team, the mitigation action is to start the recruitment process before project approval with a disclaimer indicating recruitment subject to formal approval of the project.

The table below outlines the risk and mitigation measures being considered for this proposal:

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)
Recruitment	Recruitment of staff, individual consultant and consulting firms	Low	Low	ToRs developed in time and recruitment process completed prior to official kick-off of projects	Delivery Partner
Project Implementation	Flood and Landslides risks site selection	Low	Low	NAP Readiness robust Proposal Development Consultations identified the key government focal points for decision making to ensure a consensus is reached on site selection	NDA, Delivery partner
Environmental / Social Risk	Unknown (E&S risks will be considered during concept	Low	Low	Not Applicable	Not Applicable

	note development stage for Sub-Outcome 2.3)				
Financial Risk	Money laundering, terrorist financing, or prohibited practices	Low	Low	The delivery partner has a decentralized financial management system, which would enable additional oversight and risk mitigation measures	Government of Rwanda, Delivery partner
Disruption risk	Due to natural disaster, conflict, or instability	Low	Low	The delivery partner operates in over 30 countries and has a regional office hub in Addis Ababa, Ethiopia. The team is able to work either remotely or from other duty stations during periods of natural disaster, conflict, or instability	Delivery partner

Monitoring and evaluation: The Delivery Partner will be responsible for the reporting of grant-funded activities. GGGI has performed the role of Delivery Partner in several GCF-funded projects and has developed skills and capacity in the area of reporting for the purposes of GCF grant activities. In line with the Framework Agreement between GCF and GGGI, progress reports using the GCF template will be submitted for disbursement requests and project closing as well as audited financial statements at the portfolio level at the end of each year. GGGI will prepare periodic revisions to reflect changes in six monthly and annual expense category budgets, monitor and review project expenditure reports and communicate and share with the NDA and GCF Secretariat (if required).

Regarding internal M&E, GGGI undertakes monthly and annual project reporting to provide a mechanism for regular collection of information on progress to support oversight and adaptive management and external reporting to GGGI members/donors. The project progress is reported against the log frame and budget. GGGI also engages independent evaluators to ensure unbiased, credible project evaluation and the final report is being published on GGGI website.

Other relevant information: In terms of cost benefit analysis, disaster risk reduction has been estimated to amount in savings of $7 (sometimes $4-7) for every $1 invested. Recent reports have found that the City of Kigali alone spends approximately 1.5 billion RWF (1.6 million USD) annually to control flooding[36] with 200 billion RWF lost due to disasters in 2018 alone[37] due to prolonged periods of excessive rainfall. The National Risk Atlas estimated that natural disasters (including landslides, flooding, earthquakes, windstorms, and drought) could cost Rwanda an estimated 100 billion RWF (110 million USD) nationwide with flooding as the most damaging climate-induced disaster caused by extreme weather events.[38] The activities proposed present a long-term, yet cost-effective investment in improving and strengthening the climate-resilience and disaster risk mitigation efforts of Rwanda at a critical time – particularly in densely populated areas that are critical to the country's sustainable economic growth and development.

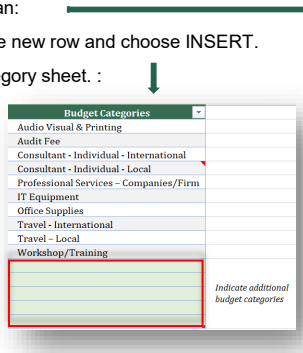
[36] Nkurunziza, M. (2018). City of Kigali spends Rwf1.5 billion annually to contain flooding. *The New Times*: Kigali.
[37] Ntirenganya, E. (2019). Rwanda lost Rwf200bn due to disasters last year. *The New Times*: Kigali.
[38] Bigabo, P. (2016). Disaster Risks Could Cost Rwanda Rwf100 Billion. *KT Press*: Kigali.

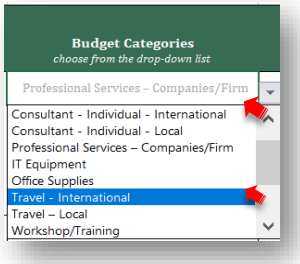
Readiness and Preparatory Support Budget and Procurement Plan

Readiness Grant Budget Preparation Guidelines

The following considerations are important when completing the budget:

1. Before preparing the Readiness and PPF budget, please read the full guidance on our website (https://www.greenclimate.fund/how-we-work/empowering-countries).
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. :





Project Management Cost:

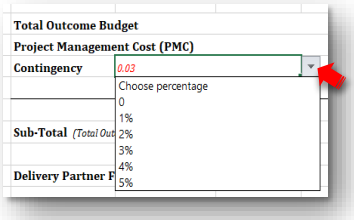
Project management costs (PMC) are the direct administrative costs incurred to execute a project. They should cover only incremental costs incurred due to the GCF contribution. In most cases, these costs are directly related to the support of a dedicated project management unit (PMU) which manages the 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 you get to the end of the project and you haven't spent Contingency, you can't increase the scope of the project or buy some more equipment to use it up.

6. The Budget Notes sheet should be used to record explanations, further details or cost breakdowns for individual lines

If you are unsure about how to complete the budget template, please send your query to: countries@gcfund.org

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		Budget Categories (choose from the drop-down list)	Detailed Budget (in US$) Unit	# of Unit	Unit Cost	Total Budget (per budget category)	Total Budget (per sub-outcome)	Total Budget (per outcome)	Disbursement Plan (USD) 6m	12m	18m	24m			Disbursement Plan (%) 6m	12m	18m	24m			
Outcome 1: Capacity and coordination strengthened for main institutions to effectively mitigate floods and prevent landslides	Sub-Outcome 1.1: AE, NDA, other relevant central institutions and local governments fully equipped to support City of Kigali and at least 4 urban areas experiencing rapid growth and high vulnerability to floods and landslides	Consultant - Individual - International	W/Day	38	702	26,676	150,969	265,356.00	16,156	3,507	3,507	3,507	-	-	61%	13%	13%	13%	0%	0%	1
		Consultant - Individual - Local	W/Day	307	189	58,023			35,142	7,627	7,627	7,627	-	-	61%	13%	13%	13%	0%	0%	1
		Workshop/Training	Number	3	1,834	5,502			3,332	723	723	723	-	-	61%	13%	13%	13%	0%	0%	1
		Travel - International	Trip	0		-			-	-	-	-	-	-	61%	13%	13%	13%	0%	0%	1
		Travel – Local	Trip	6	3,128	18,768			11,367	2,467	2,467	2,467	-	-	61%	13%	13%	13%	0%	0%	1
		Publication/Editing	Quantity	50	40	2,000			1,211	263	263	263			61%	13%	13%	13%	0%	0%	1
		IT Equipment	Equipmen	20	2,000	40,000			20,000	20,000	-	-	-	-	50%	50%	0%	0%	0%	0%	1
	Sub-Outcome 1.2: Institutional and regulatory framework to effectively mitigate floods and prevent landslides strengthened	Consultant - Individual - International	W/Day	18	702	12,636	114,387		7,582	2,527	2,527	-	-	-	60%	20%	20%	0%	0%	0%	1
		Consultant - Individual - Local	W/Day	345	189	65,205			39,123	13,041	13,041	-	-	-	60%	20%	20%	0%	0%	0%	1
		Workshop/Training	Number	8	4,125	33,000			19,800	6,600	6,600	-	-	-	60%	20%	20%	0%	0%	0%	1
		Travel - International	Trip	0	2,000	-			-	-	-	-	-	-	60%	20%	20%	0%	0%	0%	1
		Travel – Local	Trip	1	3,546	3,546			2,128	709	709	-	-	-	60%	20%	20%	0%	0%	0%	1
Outcome 2: Appropriate technical studies identified and prioritized, climate finance strategies and project pipeline strengthened for effective storm water and landslide management in Kigali City and urban areas experiencing rapid growth and highly vulnerable to floods and landslides outside Kigali city	Sub-Outcome 2.1: Kigali slope management systems improved in key zones for risk reduction	Consultant - Individual - International	W/Day	30	702	21,060	168,396	690,764.00	10,530	10,530	-	-	-	-	50%	50%	0%	0%	0%	0%	1
		Consultant - Individual - Local	W/Day	224	189	42,336			21,168	21,168	-	-	-	-	50%	50%	0%	0%	0%	0%	1
		Professional Services – Companies/Firm	Fee	1	100,000	100,000			50,000	50,000	-	-	-	-	50%	50%	0%	0%	0%	0%	1
		Publication/Editing	Number	1	5,000	5,000			2,500	2,500	-	-	-	-	50%	50%	0%	0%	0%	0%	1
		Travel - International	Trip	0	-	-			-	-	-	-	-	-	50%	50%	0%	0%	0%	0%	1
		Travel – Local	Trip	0	-	-			-	-	-	-	-	-	50%	50%	0%	0%	0%	0%	1
	Sub-Outcome 2.2: Improved storm water management through run-off reduction strategies	Consultant - Individual - International	W/Day	88	702	61,776	101,552		12,355	12,355	37,066	-	-	-	20%	20%	60%	0%	0%	0%	1
		Consultant - Individual - Local	W/Day	184	189	34,776			6,955	6,955	20,866	-	-	-	20%	20%	60%	0%	0%	0%	1
		Professional Services – Companies/Firm	Fee		-	-			-	-	-	-	-	-	20%	20%	60%	0%	0%	0%	1
		Publication/Editing	Number	1	5,000	5,000			1,000	1,000	3,000	-	-	-	20%	20%	60%	0%	0%	0%	1
		Travel - International	Trip	0	-	-			-	-	-	-	-	-	20%	20%	60%	0%	0%	0%	1
		Travel – Local	Trip	0	-	-			-	-	-	-	-	-	20%	20%	60%	0%	0%	0%	1
	Sub-Outcome 2.3: Concept notes and financing strategy developed for local climate action in prevention of flood and landslides	Consultant - Individual - International	W/Day	76	702	53,352	170,106		-	-	25,609	27,743	-	-	0%	0%	48%	52%	0%	0%	1
		Consultant - Individual - Local	W/Day	586	189	110,754			-	-	53,162	57,592	-	-	0%	0%	48%	52%	0%	0%	1
		Workshop/Training	Number	4	1,500	6,000			-	-	2,880	3,120	-	-	0%	0%	48%	52%	0%	0%	1
		Travel – Local	Trip	0	-	-			-	-	-	-	-	-	0%	0%	48%	52%	0%	0%	1
	Sub-Outcome 2.4: Improved landslide and storm water management in urban areas experiencing rapid growth and high vulnerability to floods and landslides	Consultant - Individual - International	W/Day	46	702	32,292	250,710		16,146	12,917	3,229	-	-	-	50%	40%	10%	0%	0%	0%	1
		Consultant - Individual - Local	W/Day	362	189	68,418			34,209	27,367	6,842	-	-	-	50%	40%	10%	0%	0%	0%	1
		Professional Services – Companies/Firm	Fee	1	150,000	150,000			75,000	60,000	15,000	-	-	-	50%	40%	10%	0%	0%	0%	1
		Workshop/Training	Number	0	-	-			-	-	-	-	-	-	50%	40%	10%	0%	0%	0%	1
		Travel - International	Trip	0	-	-			-	-	-	-	-	-	50%	40%	10%	0%	0%	0%	1
		Travel – Local	Trip	0	-	-			-	-	-	-	-	-	50%	40%	10%	0%	0%	0%	1
Outcome 3: Knowledge management, information sharing, and communications strengthened to effectively mitigate floods and prevent landslides	Sub-Outcome 3.1: Rwanda's medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs identified	Consultant - Individual - International	W/Day	58	702	40,716	137,522	464,792.00	16,286	16,286	8,143	-	-	-	40%	40%	20%	0%		0%	1
		Consultant - Individual - Local	W/Day	454	189	85,806			34,322	34,322	17,161	-	-	-	40%	40%	20%	0%	0%	0%	1
		Workshop/Training	Number	4	1,500	6,000			2,400	2,400	1,200	-	-	-	40%	40%	20%	0%	0%	0%	1
		Publication/Editing	Quantity	1	5,000	5,000			2,000	2,000	1,000	-	-	-	40%	40%	20%	0%	0%	0%	1
		Travel – Local	Trip	0	-	-			-	-	-	-	-	-	40%	40%	20%	0%	0%	0%	1
	Sub-Outcome 3.2: Post-floods and landslides response and recovery efforts available	Consultant - Individual - International	W/Day	54	702	37,908	127,202		-	-	18,954	18,954	-	-	0%	0%	50%	50%	0%	0%	1
		Consultant - Individual - Local	W/Day	446	189	84,294			-	-	42,147	42,147	-	-	0%	0%	50%	50%	0%	0%	1
		Publication/Editing	Number	1	5,000	5,000			-	-	2,500	2,500	-	-	0%	0%	50%	50%	0%	0%	1
		Travel - International	Trip	0	-	-			-	-	-	-	-	-	0%	0%	50%	50%	0%	0%	1
		Travel – Local	Trip	0	-	-			-	-	-	-	-	-	0%	0%	50%	50%	0%	0%	1
	Sub-Outcome 3.3: Increased awareness through workshops for stakeholders and local communities in all flood and landslide prone areas	Consultant - Individual - International	W/Day	54	702	37,908	200,068		-	-	18,954	18,954	-	-	0%	0%	50%	50%	0%	0%	1
		Consultant - Individual - Local	W/Day	476	189	89,964			-	-	44,982	44,982	-	-	0%	0%	50%	50%	0%	0%	1
		Professional Services – Companies/Firm	Fee	1	15,000	15,000			-	-	7,500	7,500	-	-	0%	0%	50%	50%	0%	0%	1
		Workshop/Training	Number	20	1,500	30,000			-	-	15,000	15,000	-	-	0%	0%	50%	50%	0%	0%	1
		Audio Visual & Printing	Quantity	1000	3	3,000			-	-	1,500	1,500	-	-	0%	0%	50%	50%	0%	0%	1
		Travel – Local	Trip	16	1,481	23,696			-	-	11,848	11,848	-	-	0%	0%	50%	50%	0%	0%	1
		Publication/Editing	Quantity	1	500	500			-	-	-	500	-	-	0%	0%	0%	100%	0%	0%	1
Outcome 4: Mechanisms for Reporting, Monitoring and Review of adaptation and resilience planning progress developed to gather lessons and integrate them into future iterations of the identified flood mitigation and landslide management planning process	Sub-outcome 4.1: Monitoring and evaluation framework of Adaptation and resilience planning established	Consultant - Individual - International	W/Day	14	702	9,828	33,429	73,398.00	-	-	4,914	4,914	-	-	0%	0%	50%	50%	0%	0%	1
		Consultant - Individual - Local	W/Day	109	189	20,601			-	-	10,301	10,301	-	-	0%	0%	50%	50%	0%	0%	1
		Workshop/Training	Number	2	1,500	3,000			-	-	1,500	1,500	-	-	0%	0%	50%	50%	0%	0%	1
		Travel - International	Trip	0	-	-			-	-	-	-	-	-	0%	0%	50%	50%	0%	0%	1
		Travel – Local	Trip	0	-	-			-	-	-	-	-	-	0%	0%	50%	50%	0%	0%	1
	Sub-outcome 4.2: Indicators and methods for monitoring and review of adaptation, readiness and resilience of built-environment defined	Consultant - Individual - International	W/Day	16	702	11,232	39,969		-	-	5,616	5,616	-	-	0%	0%	50%	50%		0%	1
		Consultant - Individual - Local	W/Day	115	189	21,735			-	-	10,868	10,868	-	-	0%	0%	50%	50%	0%	0%	1
		Workshop/Training	Number	3	2,334	7,002			-	-	3,501	3,501	-	-	0%	0%	50%	50%	0%	0%	1
		Travel - International	Trip	0	-	-			-	-	-	-	-	-	0%	0%	50%	50%	0%	0%	1
		Travel – Local	Trip	0	-	-			-	-	-	-	-	-	0%	0%	50%	50%	0%	0%	1

Total Outcome Budget							**1,494,310.00**	440,713	317,265	432,706	303,626	-	-
Project Management Cost (PMC) Up to 7.5% of Total Activity Budget	Project Management Unit - International	Days	60	875	52,503	112,073	Percentage of PMC requested: **7.5%**						
	Project Management Unit - Local	Days	15	196	2,938								
	Audit Fee	Fee	2	7,000	14,000								
	Travel – Local	Trips	7	1,500	10,500								
	Professional Services – Companies/Firm	Fee	1	19,932	19,932								
	IT Equipment	Quantity	3	2,400	7,200								
	Office Supplies	Quantity	1	5,000	5,000								

FOR GREEN CLIMATE FUND SECRETARIAT'S USE ONLY

Breakdown (per budget category)	Total (per budget category)
Audio Visual & Printing	3,000
Audit Fee	14,000
Consultant - Individual - International	345,384
Consultant - Individual - Local	681,912
Professional Services – Companies/Firm	284,932
IT Equipment	47,200
Office Supplies	5,000
Travel - International	-
Travel – Local	56,510
Workshop/Training	90,504
Project Management Unit - International	52,503
Project Management Unit - Local	2,938
Publication/Editing	22,500
0	-
0	-
Total Outcome Budget + PMC	**1,606,383**

FOR GREEN CLIMATE FUND SECRETARIAT'S USE ONLY

Total Outcome Budget		**1,494,310**
Project Management Cost (PMC)	7.5% requested	**112,073**
Contingency	5% requested	**74,716**
Sub-Total (Total Outcome Budget + Contingency + PMC)		**1,681,099**
Delivery Partner Fee (DP) - Up to 8.5% of the Sub-Total		**142,893**
Total Project Budget (Total Activity Budget + Contingency + PMC + DP)	**$**	**1,823,993**

Budget Note	Detailed Description
1 Workshop	A workshop in Kigali will cost USD 50 per participant and will vary from 30 to 75 participants per workshop
	A workshop in district will cost USD 25 participants and will have an average of 30 participants per workshop
	USD 5,500 for sub outcome 1 is for 3 workshops in Kigali with an average participants of 37 each
	USD 33,000 for suboutcome 1.2 is for 4 workshop in districts (@ USD 25 for 30 participants each) and 4 workshops in Kigali (@USD 50 for 75 participants for 2 days each)
	USD 6000 for sub outcome 2.3 for 4 workshops @ USD 50 for 30 participants each
	USD 6000 for sub outcome 3.1 for 4 workshops @ USD 50 for 30 participants each
	USD 30000 for sub outcome 3.3 for 12 workshops in 4 districts (50 participants @25 USD each) , 3 workshops in Kigali (50 participants @ USD 50 each) and 5 Umuganda (local community work) in Each district +Kigali (USD 1500 per one Umuganda)
	USD 3000 for sub outcome 4.1 for 2 workshops @ USD 50 for 30 participants each
	USD 7000 for sub outcome 4.2 for 4 workshops @ USD 50 for 35 participants each
2. IT equipment	The Budget for IT equipment in Sub outcome 1.1 is for Software for flood monitoring and management. 20 softwares budgeted at USD 2,000 each
	The budget for IT Equipments in PCM is for 3 Laptops (Lenovo X1 carbon) for Project staff . One laptop budgeted at USD 2400

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						
IT Equipment	Software for flood monitoring and management	40,000	open tender	10,001- 50,000	1-Jan-2020	1-Feb-2020
Workshops/Training	Conference rLogistics and Facilities (each workshop will cost below 10,000)	90,504	3 quotations	1,001-10,000	1-Jan-2020	Different dates
Audio visual & Printing	Priting	3,000	3 quotations	1,001-10,000	1-Oct-2020	1-Nov-2020
Publication/Editing	Designing, editing, printing and translation	22,500	Open tender	10,001-50,000	1-Apr-2020	1-May-2020
Local Travel	Travel for workshops, capacity buildings, stakeholde	46,010	GGGI Travel rules	n/a	n/a	n/a
TV & Radio subscription	TV & Radio show to Increse awareness	15,000	Direct procurement	10,001-50,000	1-May-2021	1-Jul-2021
		217,014				
Consultancy Services						
Individual Local Consultant Level F	Senior Green City Development Specialist	152,064	GGGI HR rules	50,001-500,000	1-Jan-2020	1-Feb-2020
Individual Local Consultant Level E	Green City Development Specialist	112,320	GGGI HR rules	50,001-500,000	1-Jan-2020	1-Feb-2020
Individual Local Consultant Level E	Private Sector Engagement Specialist	112,320	GGGI HR rules	50,001-500,000	1-Jan-2020	1-Feb-2020
Individual Local Consultant Level E	Gender-responsive Pogramming	49,920	GGGI HR rules	50,001-500,001	1-Jan-2020	1-Feb-2020
Individual Local consultant X4	Green City Assistant	41,472	GGGI HR rules	50,001-500,000	1-Jan-2020	1-Feb-2020
		468,096				
International consulting firm	Conduct a study on Landslide ans storm water man	250,000	Open tender		1-Jan-2020	1-Feb-2020
		250,000				
PMC related procurement						
Audit	Audit of the project	14,000	Open tender	10,001-50,000	1-Jul-2020	1-Dec-2020
Office supplies	Office supplies	5,000	3 quotations	1,001-10,000	1-Jan-2020	1-Feb-2020
Internal communication	Internet and Mobile phone subscription	10,932	Open tender	10,001-50,000	1-Jan-2020	1-Feb-2020
IT Equipment	Laptops	7,200	3 quotations	1,001-10,000	1-Jan-2020	1-Feb-2020
Vehicle rental	Vehicle rental to facilitate project activities	9,000	3 quotations	1,001- 10,000	1-Jan-2020	1-Feb-2020
Local travel	Project Management related travels	10,500	GGGI Travel rules	n/a	n/a	n/a
		56,632				
	Sub-Total (US$)	**991,742**				

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
Project Management Unit - International
Project Management Unit - Local
Publication/Editing

Indicate additional budget categories

	Activity 2.1.1: Develop detailed landslide risk assessment and prevention studies for at least 5 high risk zones	**Activity 2.4.1:** Conduct assessment of current storm water management and landslide management in at least 4 urban areas identified outside Kigali city and are experiencing rapid growth and high vulnerability to floods and landslides
Professional Fees	75,000	120,000
International Travel	10,000	10,000
Local Travel		5,000
Workshops	6,000	6,000
Publication	3,000	3,000
Miscellaneous	6,000	6,000
Sub-total	100,000	150,000
Total (USD)		**250,000**

	STAFF				Direct costs							
Position title	**Grade**	**Cost per day in $**	**Days**	**Cost in $**	**International Travel**	**Local Travel**	**Office supplies**	**Internal communication (internet/phone)**	**IT equipment**	**Audit**	**Vehicle rental**	**Subtotal**
Non-Personnel						10,500	5,000	10,932	7,200	14,000	9,000	**$ 56,632**
Country Rerpresentative	X12INT	1,201	20	24,028							-	**$ 24,028**
Lead, Rwanda Program Coordination	X10INT	784	20	15,679								**$ 15,679**
Senior Green Growth Officer	X9INT	640	20	12,796								**$ 12,796**
Senior Associate, Administration	X7RW	196	15	2,938								**$ 2,938**
											TOTAL:	**$ 112,073**