



PROJECT IDENTIFICATION FORM (PIF).

PROJECT TYPE: FULL SIZED PROJECT

TYPE OF TRUST FUND: LDCF

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PART I: PROJECT INFORMATION

Project Title:	Building the capacity of Rwanda's government to advance the National Adaptation Planning process		
Country(ies):	Rwanda	GEF Project ID: ¹	6986
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01330
Other Executing Partner(s):	Rwandan Environment and Management Authority (REMA)	Submission Date:	26/09/2014
		Resubmission Date :	21/01/2014
GEF Focal Area(s):	Climate change adaptation	Project Duration (Months)	48 months
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	[if applicable]		

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²:

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
CCA-2 2.3: Access to improved climate information and early-warning systems enhanced at regional, national, sub-national and local levels.	LDCF	2,346,457	2,328,895
CCA-3 3.1: Institutional arrangements to lead, coordinate and support the integration of climate change adaptation into relevant policies, plans and associated processes established and strengthened.	LDCF	3,653,543	25,569,705
Total Project Cost		6,000,000	27,898,600

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: Enhance the capacity of the Rwanda's government to advance the National Adaptation Planning process					
Project Component	Financing Type ³	Project Outcomes	Trust Fund	(in \$)	
				GEF Project Financing	Co-financing
Technical and institutional capacity for the NAP process in Rwanda.	TA/INV	1. Technical and institutional capacity for NAP strengthened using up-to-date climate information.	LDCF	2,235,000	2,218,272
Funding the NAP process.	TA	2. Funding strategy for NAP established in Rwanda, including pilots to inform medium- to long-term adaptation investments.	LDCF	2,900,000	17,823,872
Monitoring, reviewing and	TA	3. Capacity for monitoring,	LDCF	580,000	6,531,272

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the GEF Website, [Focal Area Results Framework](#) which is an Excerpt from [GEF-6 Programming Directions](#).

³ Financing type can be either investment or technical assistance.

knowledge sharing to learn from the NAP process in Rwanda		reviewing and knowledge sharing to learn from the NAP process in Rwanda increased.			
Subtotal				5,715,000	26,573,416
Project Management Cost (PMC) ⁴				285,000	1,325,184
Total Project Cost				6,000,000	27,898,600

If Multi-Trust Fund project: PMC in this table should be the total and enter trust fund PMC breakdown here ()

INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Please include confirmed co-financing letters for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National Government	Ministry of Natural Resources	Grant	19,645,600
Multilateral Agency	CDKN	Grant	653,000
GEF Agency	UNDP/One UN	Grant	6,800,000
GEF Agency	UNEP/UNESCO	Grant	500,000
GEF Agency	UNEP DTU Partnership	Grant	300,000
Total Co-financing			27,898,600

C. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
UNEP	LDCF	Rwanda	Climate change adaptation		6,000,000	570,000	6,570,000
Total GEF Resources					6,000,000	570,000	6,570,000

a) No need to fill this table if it is a single Agency, single Trust Fund, single focal area and single country project.

b) Refer to the [Fee Policy for GEF Partner Agencies](#).

D. PROJECT PREPARATION GRANT (PPG)⁵

Is Project Preparation Grant requested? Yes X No If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
UNEP	LDCF	Rwanda	Climate change adaptation	(select as applicable)	150,000	14,250	164,250

⁴ For GEF Project Financing up to \$2 million, the PMC could be up to 10% of the subtotal; above \$2 million, the PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

⁵ The PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$1 mil; \$100k for PF up to \$3 mil; \$150k for PF up to \$6 mil; \$200k for PF up to \$10 mil; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

Total PPG Amount	150,000	14,250	164,250
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E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Not applicable to LDCF-funded project.

PART II: PROJECT JUSTIFICATION

A. PROJECT OVERVIEW

A.1. Project Description

A.1.1 The problem the project seeks to address, root causes and barriers that need to be addressed.

Rwanda is currently experiencing strong economic growth in sectors such as agriculture, energy, mining, industry and services. This includes the development of a flourishing green economy based mainly on tourism⁸. However, sustainable development in the country is threatened by the increasing demands of a rapidly growing population on land, water, food and energy resources. Furthermore, Rwanda's socio-economic development and the wellbeing of its people are vulnerable to the anticipated effects of climate change⁹. The main effects of climate change in Rwanda include: i) an increased frequency of extreme flood events; ii) increased duration and frequency of droughts; and iii) increased average temperatures¹⁰. These changes are expected to become more severe over the ensuing decades and result in multiple negative effects on the major economic sectors in the country (see Appendix 1). Rwanda – similar to many other LDCs – is mostly implementing project-specific interventions to address localised needs for climate change adaptation. Through NAPA-catalysed projects, climate change adaptation in Rwanda has focused on increasing the climate resilience of local communities in priority intervention sites. However, to promote national social and economic development that is climate resilient, an integrated – as opposed to project-based – approach is needed. The Green Growth and Climate Resilience Strategy (GGCRS, 2011) is an important first step to move from project-based adaptation to an integrated approach to adaptation.

Despite the development of guiding documents such as the GGCRS, Rwanda's capacity to implement integrated climate change adaptation is challenged by multiple factors. These factors include *inter alia*: i) limited access to well-organised knowledge to inform climate-resilient planning processes; ii) limited financial and technical capacities to implement policies, strategies and plans that integrate climate change; iii) absence of the required institutional structures to coordinate and fund cross-sectoral and sectoral planning; and iv) limited institutional structures and technical capacity to initiate a functional, cross-sectoral and iterative NAP process. The **problem** that this project will address is that the national response to climate change and variability in Rwanda is currently project-based with interventions that respond to localised adaptation needs. Consequently, it is expected that the vulnerability of Rwanda's population and socio-economic development to the negative effects of climate change will increase in the future. One of the drivers of the country's vulnerability to climate change is the limited capacity of local and national institutions to integrate climate change into social and economic development in a coherent and systematic manner.

The **preferred solution** is to strengthen the technical and institutional capacity in Rwanda to: i) systematically integrate climate change adaptation into existing policies, strategies and plans as well as planning processes at both national and local scales; and ii) steer Rwanda from project-based adaptation to an integrated approach to adaptation. This strengthened capacity will increase the resilience of the country to the effects of climate change in the medium-

⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

⁸ UNEP news center, 2014. Rwanda Restores Ecosystems, Generating Record Tourism and New Opportunities for Growth. Accessed on 28 November 2014 at <http://www.unep.org/newscentre/Default.aspx?DocumentID=2788&ArticleID=10861&l=en#sthash.TrQSJdP3.dpuf>

⁹ GoR (2011). Rwanda National Strategy on Climate Change and Low Carbon Development.

¹⁰ Ministry of Natural Resources (2012). Rwanda Second National Communication under the UNFCCC.

to long-term and support sustainable development in Rwanda. Importantly, the project will build on initiatives that are aligned with the NAP process including the NAPA and NAPA-catalysed projects (see Section B). Furthermore, lessons learned from Rwanda's pioneering experience in the NAP process will be used to inform the NAP process in other LDCs.

The barriers to the implementation of the preferred solution are as follows:

- **Capacity:** The Government of Rwanda (GoR) recognises the need to mainstream considerations of climate change adaptation into cross-sectoral and sectoral policies, strategies and plans at national and local scales. However, government departments such as Rwanda Environment Management Authority (REMA) and Rwanda Natural Resources Authority (RNRA) were created in 2006 and 2011, respectively, and have only become operational recently. As a result, there are gaps in **technical and institutional capacity** within Rwanda's government to integrate climate change into policies, strategies and plans. The Climate Change and International Obligations Unit (CCIOU), established in 2010, is a progressive step towards more coherent adaptation planning. However, the technical capacity and availability of skilled staff within the Ministry of Natural Resources (MINIRENA), Ministry of Agriculture and Animal Resources (MINAGRI), Ministry of Finance and Economic Planning (MINECOFIN), Ministry of Local Government (MINALOC), Ministry of Infrastructure (MININFRA), Ministry of Health (MOH) and other relevant national institutions is not yet sufficient to fulfil the complex function of integrating climate change priorities into cross-sectoral and sectoral development planning. This barrier will mainly be addressed under Components 1 and 3 of the proposed project. Furthermore, proposed landscape-scale Ecosystem-based Adaptation (EbA) pilots under Component 2 will also contribute towards capacity building and policy integration work carried out under Component 1. These landscape-scale EbA pilots will increase the capacity of policy- and decision-makers to undertake effective long-term land-use planning at the national scale.
- **Policy and finance:** At present, many cross-sectoral and sectoral policies, strategies and plans do not include explicit consideration of building resilience to climate change (see Section A.1.2 and Appendix 3). As a result of this limited integration of climate change into cross-sectoral planning, the sustainability of Rwanda's socio-economic development is threatened. Additionally, Rwanda has not yet fully made use of the existing opportunities to access international and national climate financing. Therefore, the funds allocated to adaptation to climate change in Rwanda are limited (see Section A.1.2 and Appendix 4). This barrier will be addressed under Components 1 and 2.
- **Climate change information and knowledge:** Despite the recent implementation of the African Adaptation Programme (AAP) and UNDP-UNEP LDCF (LDCF1) projects to support the development of a national climate monitoring system, the availability and quality of climate data and information is inadequate for the implementation of an integrated approach to climate change adaptation. In addition, there are still considerable gaps in the use of climate information, which frequently results in a superficial inclusion of such information in national planning processes. The current climate monitoring system requires technical strengthening, including: i) capacity-building of technical staff; and ii) a strategy for sustained operation and maintenance. Furthermore, knowledge on the most appropriate methods for adaptation across sectors – e.g. EbA interventions – is also often insufficient for long-term land use planning. This is partly a result of the limited availability of data to inform integrated adaptation. One of the factors for this data gap is the absence of mechanisms for collection, analysis and sharing of data on the effectiveness of climate change adaptation in Rwanda. As a result, there is a limited understanding and awareness among the government and general public of future climate change scenarios and adaptation opportunities. This barrier will be addressed under Component 3.

The proposed project will address the above-mentioned barriers. In so doing, the project will support the efforts of the GoR to integrate adaptation to climate change into its economic development in a systematic manner. The project is divided into the following three components: i) technical and institutional capacity for the NAP process in Rwanda; ii) funding the NAP process; and iii) monitoring, reviewing and knowledge sharing to learn from the NAP process in Rwanda.

A.1.2 The baseline scenario and any associated baseline projects.

Component 1. Technical and institutional capacity for the NAP process in Rwanda

- *Climate information:* In the past five years, the technical and institutional capacity to address climate change in Rwanda has increased at both national and local scales. The country has initiated the development of a climate information system¹¹ through AAP- and LDCF-funded initiatives entitled “*Supporting Integrated and Comprehensive Approaches to Climate Change Adaptation in Africa – Building a Comprehensive National Approach in Rwanda*” and “*Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in Flood-prone Areas*”, respectively. These projects contributed to: i) the installation of 22 Automatic Weather Stations (AWS) in the country; ii) the implementation of a data analysis system, including the provision of material and training; and iii) the development of an EWS system in a pilot site in the Gishwati area. Currently, there is approximately one AWS per district. However, this climate information system is not fully operational as there remain some gaps in: i) the geospatial coverage of the monitoring system; ii) the available data processing equipment; and iii) the technical capacity of meteorological offices’ staff¹². In addition, there is no model in place for operation and maintenance of the current climate information system in the long-term. Therefore, the capacity of the meteorological services to produce up-to-date and long-term climate information, models and projections is not yet adequate to inform medium- and long-term adaptation planning.
- *Policies, strategies and plans:* In Rwanda, the GGCRS forms the basis for implementing the NAP process. The objective of this overarching strategy is to guide the process of mainstreaming climate-resilient and low-carbon development into all sectors of the economy through an iterative roadmap for implementation (see Appendix 2). The GGCRS includes appendices that detail important information on which the NAP process will build. These appendices include *inter alia*: i) a baseline report; ii) working papers for particular sectors with information on vulnerability to – and opportunities in the face of – climate change, global best practices, and policy options; and iii) a climate finance toolkit for Rwanda. However, the GGCRS does not include any recent information specific to the NAP process. For example, the technical guidelines detailing particular elements that should be included by LDCs to enable the implementation of the NAP process were developed by the LDC Expert Group (LEG) after 2011 and therefore are not considered in the GGCRS. Apart from the GGCRS, climate change is integrated to varying degrees into crosscutting strategies in Rwanda. For example, the Second Economic Development and Poverty Reduction Strategy (EDPRS2: 2013-2018) report includes considerations of climate change in approximately half of the sections. However, Vision 2020 that identifies indicators and targets to be achieved in six pillars including skilled human capital, infrastructure development and modern agriculture does not mention climate change. At the sectoral level, some policies, strategies and plans have integrated climate change considerations extensively (e.g. in the agricultural sector). However, other key sectors such as water and sanitation, and natural resources management still require guidance for revision (see Appendix 3 for details on the degree to which climate change is currently considered – as well as entry points – in policies, strategies and plans in key sectors). Additionally, the process of integrating climate change into planning has not been reported on. Therefore, the systematic integration of climate change adaptation into cross-sectoral and sectoral policies, strategies and plans still remain to be implemented, reported on, formalised or institutionalised¹³ to enable long-term adaptation planning.
- *Technical and institutional capacity:* The capacity to implement adaptation interventions has increased locally as a result of training campaigns and the inclusion of local community members in previous projects (e.g. those financed by the LDCF and AAP). However, this increased capacity is limited to government staff and local communities targeted by these initiatives. There is a need to strengthen the existing capacity at the national scale and across all sectors to support an integrated approach for adaptation to climate change¹⁴. In particular, the

¹¹ The terms “climate information system” in the document are used to designate a network of monitoring equipment to track multiple climate variables in the country as well as the appropriate human-power and equipment to gather and analyse this climate data.

¹² WACDEP/GWP Capacity Development in Africa. 2013. Economics of Adaptation, Water Security and Climate Resilient Development in Africa: detailed assessment of the learning needs in Rwanda.

¹³ Kazoora, C. 2013. Public Expenditure Review for Environment and Climate Change for Rwanda, 2008-2012. Report prepared for REMA.

¹⁴ WACDEP/GWP Capacity Development in Africa. 2013. Economics of Adaptation, Water Security and Climate Resilient Development in Africa: detailed assessment of the learning needs in Rwanda.

technical capacities within MINIRENA, MINAGRI, MINECOFIN, MINALOC, MININFRA and MOH need to be developed, as well as the institutional capacity of these and other line ministries to coordinate, for a cross-sectoral and multi-level approach to medium- to long-term adaptation planning. In addition, there is a need for enhancing the awareness of local authorities, CSOs and local communities on the predicted effects of climate change in the medium- to long-term and adaptation opportunities. Furthermore, business owners and entrepreneurs in the private sector require support to increase the resilience of their businesses to climate change.

Baseline projects:

- **The FONERWA (Environment and Climate Change Fund in Rwanda) project on Early Warning Systems (EWS)** will be implemented during the period 2014–2017 with a budget of US\$ 2,100,000. The components of this project include *inter alia*: i) identifying user needs and engaging with producers and users in a participatory manner to explain the importance of the EWS system; ii) addressing the immediate capacity needs of the meteorological sector; and iii) developing communication systems, including development of SMS transmission systems and local awareness-raising campaigns. The proposed project will build on the **FONERWA project on EWS** by: i) contributing to filling the gaps in data monitoring equipment; ii) strengthening the technical capacity within the meteorological services for the existing climate information system to be fully operational; and iii) developing a business plan to support long-term operation and maintenance of the climate information system. This will provide the GoR with updated climate information to be integrated into social and economic development in the long term.
- **The UNEP-UNESCO project entitled ‘Integrated Early Warning Communication for Human Security’**, is due to start in 2015 and will be implemented in Kenya and Rwanda. The project will undertake a situational analysis of the state of vulnerability to extreme climate events of local communities and design a disaster and risk management information system that will: i) utilise a range of platforms to broadcast hazard-related information to vulnerable communities; and ii) build their capacity to upload, share and utilise hazard-related information. At least US\$ 500,000 is anticipated to be allocated for Rwanda under this project, which will be sought as co-financing. Similar to the FONERWA project on EWS, the proposed project will benefit the UNEP-UNESCO initiative by: i) addressing gaps in the weather and climate information system; and ii) developing a business plan for long-term operation and maintenance of the climate information system.
- The GoR allocates funds on a yearly basis (US\$ 20,000 per year) to support the implementation of the GGCRS. As part of these activities planned by the GoR, an assessment of policy and legal framework will be conducted to identify entry points to promote investments in green technologies and innovations. This funding is considered as co-financing for Component 1. The proposed project will build on this activity through: i) initiating the revision process to integrate adaptation to climate change into cross-sectoral and sectoral policies, strategies and plans in Rwanda; and ii) implementing a strategy for periodic review/revision of these documents.
- The training and awareness raising activities implemented by the proposed project will build on the training sessions planned by the GoR for CSOs and local authorities on mainstreaming of climate change. This government-funded activity is planned for the period July 2014–June 2015 and has a budget of US\$ 40,000. This funding is considered as co-financing for Component 2. The proposed project will further increase the adaptation capacity of CSOs and local authorities by providing them with training on medium- and long-term adaptation planning.

Component 2. Funding mechanism for the NAP process and pilots to inform medium- to long-term adaptation planning

The Stockholm Environmental Institute has estimated in 2009 that the cost of adaptation interventions to address climate change vulnerability in Rwanda would be approximately US\$50–300 million annually between the years 2011 and 2030¹⁵. Currently, the amount of funding that is accessed and allocated annually to climate change adaptation in Rwanda is substantially less than this estimated finance requirement. For example, in 2011, Rwanda

¹⁵ Stockholm Environment Institute. 2009. Economics of Climate Change in Rwanda. Oxford.

spent approximately US \$12,685,042 on climate change adaptation from domestic funds (see Table 1 in Appendix 4). In 2013, Rwanda had received a total of US\$16,322,000 from multilateral climate funds and a further US\$58,200,000 were committed¹⁶ (see Table 2 in Appendix 4). Other potential types of finance for climate change adaptation, mitigation and green growth in Rwanda (see Table 2) have yet to be fully utilised to increase the funds allocated for climate change adaptation in Rwanda.

Table 1. Potential types of finance for climate change adaptation and mitigation, and green growth in Rwanda¹⁷.

Category	Status
Environmental fiscal reforms <i>Climate finance that is sourced through environmental taxes.</i>	The only environmental taxes that are administered by GoR are linked to consumption tax on gasoil. These types of taxes should be considered a medium- to long-term financing strategy.
Carbon finance <i>Climate finance that relies on trading certificates that denote a reduction in greenhouse gas. There are two broad categories of carbon markets: i) mandatory cap-and-trade market (including Clean Development Mechanism - CDM); and ii) voluntary markets (including Reducing Emissions from Deforestation and Forest Degradation – REDD+).</i>	These strategies are managed by the Designated National Authority (DNA) in REMA. The particular amounts for the financing strategy have not yet been quantified. However, what is known is that Rwanda has: i) four ongoing projects with carbon credit buyers ¹⁸ ; and ii) five ongoing projects without carbon credit buyers ¹⁹ .
Multilateral climate funds <i>Climate finances that are supported by developed countries, including LDCF, SCCF and AF.</i>	Historically, this type of funding has been used for the project-based approach to adaptation to climate change. In 2013, Rwanda had received a total of US\$16,322,000 from multilateral climate funds and a further US\$58,200,000 were committed (see Table 2 in Appendix 4). The total amount received from multilateral climate funds to date has not yet been updated.
National climate change basket fund to manage and allocate bilateral and national funds (FONERWA) <i>Climate finances that are accessed and managed by country governments.</i>	In 2013, the National Fund for the Environment (FONERWA) became functional within REMA. This fund accesses and manages public, domestic/private, multilateral and bilateral financing sources. FONERWA has received approximately £22,5 million from DFID to operationalise the economic incentives within the framework of the Organic Law No. 4/2005. Although a substantial amount of multilateral climate finances have been received by Rwanda since 2013, FONERWA has managed only a small portion of these finances.
Concessional debt and green bonds <i>In the future, climate-related finances might be accessed through: i) concessional debts which are generally granted from development partners on terms more generous than market loans (e.g. below-market interest rates or long tenors); or ii) green bonds which are innovative debt instruments used to attract investment for low carbon initiatives.</i>	These types of funding instruments are not yet accessed or used in Rwanda. Concessional debts might be appropriate in the medium-term while green bonds will only be applicable in the long-term once the GoR's Debt Sustainability Analysis shows that commercial borrowing is a viable option.

One of the biggest challenges to implementing existing initiatives that are aligned with the NAP process – such as the GGCRS – is limited access to finance²⁰. To date, adaptation to climate change has mostly been financed by multilateral funds for localised pilot interventions. The GoR established financing mechanism – FONERWA – in 2012 to address the gaps in funding for activities such as building resilience to climate change, environmental sustainability and green growth. FONERWA has been mandated to programme, disburse and monitor funding for activities related to environment and climate change in Rwanda. Therefore, it represents progress towards a national

¹⁶ Kazoora, C. (facilitator). 2013. Public Expenditure Review for Environment and Climate Change for Rwanda, 2008-2012. United Nations Development Programme.

¹⁷ Smith School of Enterprise and the Environment. 2011. Finance Sector Working Paper. Appendix B of the Green Growth and Climate Resilience Strategy. Available at: http://www.rema.gov.rw/fileadmin/templates/Documents/rema_doc/rgg_crs2011/Finance_SWP_Final_proofed.pdf. Accessed on 4 November 2014.

¹⁸ Nuru Design Lightning Programme; Water Treatment Systems for Rural Rwanda in Mugonero Esepan, Rwesero and Nyagasambu; Water Treatment Systems for rural Rwanda in Shyira and Faew; and Rwanda Electrogaz Compact Fluorescent Lamp

¹⁹ contour global lake Kivu methane gas project; Nyabarongo Hydro Power Project; REFAD; Improved cookstoves for Rwanda and CO2 balance

²⁰ The GGCRS reports that Rwanda has yet to fully exploit the international climate financing opportunities that exist.

basket-type fund for climate change (see Table 1). For FONERWA to allocate funds strategically to support and accelerate achievement of sustainable economic development goals, four windows were created: i) conservation and sustainable management of natural resources; ii) research and development as well as technology transfer and implementation; iii) environment and climate change mainstreaming; and iv) monitoring and enforcement of Environmental Impact Assessments (EIAs). Although Rwanda has made notable progress in implementing FONERWA, this mechanism is not adequately positioned (within REMA) to provide funding for an integrated approach to adaptation across all sectors²¹. Moreover, the full suite of sources for adaptation finance in Rwanda have not yet been identified and exploited. For example, FONERWA does not have a strategy to leverage finances for climate change adaptation from sources such as the private sector.

An additional relevant basket fund to be built on by the proposed project is the ‘Support to Rwanda Public Financial Management Reform’ (UKAid). The fund aims to enhance economic development and contribute to poverty eradication in Rwanda through improving efficient and accountable use of public resources. The fund works closely with MINECOFIN to improve budget formulation and transparency. However, the impact of climate change adaptation on poverty and consequently the need to allocate public funds to adaptation across sectors is not currently considered by this fund.

In 2013, REMA and UNDP coordinated the development of the Public Expenditure Review for Environment and Climate Change (PERECC) for Rwanda (2008-2012). The objectives of the review were to: i) evaluate the effectiveness of environment and climate change mainstreaming, including an assessment of expenditure; ii) articulate recommendations for increasing efficiency of the country’s public spending in the environment and natural resources sectors; and iii) provide capacity building support in policy analysis, planning, budgeting and public sector analysis. The PERECC focussed on the public sector. Therefore, the review included the following relevant categories of expenditure: i) central, provincial and district government (and programmes implemented by the government); ii) public autonomous and semi-autonomous agencies; iii) private firms, NGOs and CBOs; and iv) communities and end-users²². This review forms a solid foundation on which Component 2 of the proposed project will build. However, the PERECC focusses on both environmental and climate change expenditure combined. Therefore, public expenditures for climate change is not specified. Therefore, at present, no assessment of expenditure specifically allocated to climate change in Rwanda has been conducted. In Appendix 4, the results of the PERECC were analysed and expenditure attributable to climate change adaptation were disaggregated to preliminarily estimate adaptation expenditure. For example, MININFRA’s expenditure for the rehabilitation of weather stations was attributed to climate change adaptation whereas MINIRENA’s expenditure on wildlife conservation was not.

In Rwanda, some research activities will be undertaken within NAPA-catalysed projects. For example, in the NAPA-catalysed project *Building resilience of communities living in degraded forests, savannahs and wetlands of Rwanda through an ecosystem management approach*, research on the effects of EbA on the climate resilience of local communities as well as the cost-effectiveness of EbA²³ will be undertaken. Yet, there is currently no scientific research underway specifically designed to inform medium- to long-term adaptation investments from adaptation finance across all sectors. Such research would focus on how EbA should be integrated into long-term land-use planning at the national scale. Furthermore, the research being undertaken on EbA is not focussing on innovating to develop the most appropriate EbA techniques for different biophysical environments in Rwanda. Intensive research on developing EbA techniques is of fundamental importance to maximise the benefits of EbA interventions for Rwanda in the long-term.

²¹ To access, channel and track funds across sectors, the governing financial body would be best positioned within a central institution such as MINECOFIN.

²² Kazura, C. 2013. Public expenditure review for environment and climate change for Rwanda, 2008-2012. UNEP and REMA. Final report.

²³ For example: UNDP-UNEP LDCF project – Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in flood prone areas (2010-2014). UNEP LDCF Project – Building resilience of communities living in degraded forests, savannahs and wetlands of Rwanda through an ecosystem management approach (2015 – 2019).

Baseline projects:

- **The Adaptation Mitigation Readiness (ADMIRE) project (2014–2016)** is funded by the Danish Ministry of Foreign Affairs. It is a collaboration between the United Nations Office for Project Services (UNOPS) and the UNEP DTU Partnership. The project supports – in collaboration with pilot countries, local experts and national government representatives – the development of sustainable financeable frameworks that will support the integration of private sector action into nationally appropriate mitigation and adaptation plans and policies. In particular, it will provide assistance to NAP actions. The proposed project will build on the private sector actions identified in the ADMIRE project when developing the adaptation finance strategy under Component 2. US\$300,000 will be allocated to Rwanda under this project, which will be sought as co-finance.
- **The Rwanda CDKN-FONERWA Capacity Building Project** is funded by the Climate and Development Knowledge Framework (CDKN). The total budget for this project from March 2013 to March 2015 is US\$653,000. The objective of the project is to support the operational performance of Rwanda’s National Environment and Climate Change Fund (FONERWA). This will be done through raising awareness and training stakeholders from the private sector, civil society and local authorities on: i) the relationships between climate change, environment and economic growth; ii) developing project proposals targeting the fund and other multilateral and bilateral climate financing sources; and iii) developing project monitoring and evaluation matrices. The proposed project will build on these activities by building on FONERWA to develop an adaptation finance strategy under Component 2 to access a full set of funding sources for adaptation.
- The total amount of **funds raised by FONERWA** (including both domestic and multilateral sources) allocated to sustainable economic development and natural resource management in Rwanda was US\$11,785,000 in 2014. This amount is considered as co-financing for the project. The interventions that will be funded with this budget mainly address localised adaptation needs including water shortage, waste production and ecosystem degradation. The adaptation finance strategy developed under Component 2 will include: i) identifying additional public, domestic/private, bilateral and multilateral sources of funding for adaptation; ii) revising the structure of existing funding institutions – including FONERWA – to increase the funds allocated to long-term adaptation; and iii) increasing the technical capacity of government stakeholders – including FONERWA – to access and channel funds for adaptation.
- The **Rwandan Sustainable Woodland Management and Natural Forest Management (PGRaF)** (US\$5,527,600) is focused on supporting the Forestry Sector and the National Forestry Policy in Rwanda to contribute to poverty alleviation, economic growth and conservation. The PGRaF’s specific objective is to control both quantitative and qualitative degradation of forest resources and to contribute to meeting Rwanda’s forestry needs (e.g. 30% forest cover by 2016). The PGRaF covers eight districts of the Southern Province where it will conduct large-scale reforestation with exotic species to address the demand for fuel wood and combat erosion. The proposed LDCF project will build on these activities through the implementation of landscape-scale EbA pilots. These pilots will be used to hone EbA techniques and generate proof of concept for policy-makers, decision-makers and the private sector for effective long-term land-use planning at a national scale.

Component 3. Monitoring, reviewing and knowledge sharing to learn from the NAP process in Rwanda

A Monitoring and Evaluation (M&E) system was developed in 2007 to track the progress in implementing the EDPRS1 for economic growth and poverty reduction. An updated version of this M&E was developed for EDPRS2 in 2013. This M&E system includes indicators for the following sectors, *inter alia*: i) finance; ii) infrastructure; iii) land-management; iv) agriculture; v) education; and vi) health. One to three indicators²⁴ have been developed for each of the 33 outcomes identified under the EDPRS2. An M&E system was also designed in 2013 to support the implementation of the GGCRS in the environment and natural resources sector²⁵. Milestones were developed for each economic sector at multiple geographic scales (i.e. national, sectoral and district) to measure the progress of the

²⁴ For each indicator, two targets are identified, for 2015/2016 and for 2017/2018. The indicators include: i) “percentage of people under the poverty line”; ii) “number of people living in planned settlements”; iii) “number of off-farm jobs created”; iv) “citizens satisfied with access to public information”; and v) “mortality rate for 0 to 5 years age-group”.

²⁵ This initiative was funded by UNDP/One UN project described in the baseline section for this component.

GGCRS in achieving sustainable use of natural resources. Approximately four indicators were developed for each of the 14 programs of actions of the GGCRS. Currently, these indicators and targets are based on the sector-specific programmes of action defined under the GGCRS²⁶. Therefore, except for one of the GGCRS indicators²⁷, the indicators of the EDPRS2 and GGCRS M&E systems are largely not applicable to the NAP process. Consequently, there is no system in place to monitor and review the performance of integrating adaptation to climate change into economic development in Rwanda.

The UNEP-UNDP NAP Global Support Programme held a regional training workshop in April 2014 in Addis Ababa to help countries to advance on their NAPs through knowledge sharing between countries and agencies. Three policymakers from the ministries of Environment, Planning and Finance of Rwanda attended the workshop. This workshop provided the Rwandan participants with basic understanding of the NAP process, its elements and steps. However, further training including targeted technical support is required to advance the NAP process in Rwanda.

Several initiatives that are aligned with the objectives of the NAP process have been implemented in Rwanda. The objectives of these initiatives include: i) the overarching objectives of the GGCRS²⁸; ii) the creation and operationalisation of FONERWA; iii) the creation of “green” villages²⁹; iv) the establishment of environment committees in each province, district, sector and cell; and v) the appointment of District Environment Officers and Facilitators. However, the efficiency and sustainability of these initiatives in increasing the resilience to climate change in Rwanda is unknown because there is currently no system for documenting the progress of the NAP process in Rwanda. These gaps in knowledge and experience hinder the opportunities of learning from the experience of GoR in advancing the NAP process.

Baseline projects:

- As part of the activities to be funded by the GoR between July 2014 – June 2015, the National Climate Change Vulnerability Index will be developed. The budget allocated by the government to implement this activity is US\$100,000. This index will provide to the proposed project the necessary baseline information to be included in the monitoring and reviewing system to measure the efficiency of the NAP process in reducing vulnerability to climate change in the long-term.
- **Strengthening the Institutional Capacity of MINIRENA** is a UNDP- and One UN-funded project (US\$ 6,800,000) that will be implemented in the period 2014–2018. With the support of RNRA and REMA, MINIRENA is expected to achieve the overarching objective of sustainable management of environmental and natural resources to support sustained national development and poverty reduction. The UNDP/One UN project will support MINIRENA to deliver on this mandate through the following outcomes:
 - strengthened planning and coordination capacity for informed policy and decision making;
 - strengthened operational performance of MINIRENA for improved service delivery;
 - strengthened capacities for outreach, engagement, and partnership with state and non-state institutions in the Environmental and Natural Resources (ENR) sector;
 - results-based M&E system for ENR sector developed and implemented; and
 - strengthened legal, regulatory and fiscal framework, and enhanced institutional capacity of RNRA to effectively govern mining operations.

²⁶ Examples of indicators are: i) “% of farms up-taking agroecology technologies” to measure the performance in achieving Action 1 “Mainstreaming of agroecology” of Programme 1 “Sustainable intensification of agriculture”; ii) “one operational inter-ministerial council and national water authority” to measure the performance in achieving Action 1 “Integrated planning and land use management” of Programme 4 “Integrated approach to land use planning and sustainable land use management”; or iii) “Survival rates and area coverage of trees planted” to measure the performance in achieving Action 1 “Improved afforestation/reforestation” of Programme 1 “Sustainable forestry, agroforestry and biomass”.

²⁷ This is “Initial completed set of projections for Rwanda” to measure the performance in achieving Action 2 “Production of climate change projections” of Programme 1 “Climate Data Projections”.

²⁸ The GGCRS includes a timeline for mainstreaming climate change into sectors.

²⁹ “Green” villages are villages that use low-carbon and climate resilience technologies, such as biogas and rainwater harvesting.

The proposed project will further strengthen the capacity of technical staff of MINIRENA to monitor and evaluate national policies, strategies and plans through providing training tools and guidelines, and implementing training events.

- The proposed project will leverage the **GoR budget for communication and outreach** (~US\$58,000 per year) allocated for the 4-year duration of the project. The objective of this government funding is to increase community awareness on environmental obligations and climate change effects to change the behaviour of Rwandan people. As an example of the activities funded by the GoR for communication and outreach, an individual consultant was hired on the budget for 2014–2015 to support REMA in organising awareness-raising events and developing the following communication tools: i) a drama film; ii) educational TV programmes; iii) children’s TV programmes; and iv) newsletters. The proposed project will build on these ongoing investments in communication by: i) generating and sharing knowledge on the NAP process in Rwanda; ii) integrating information on the NAP process in the awareness-raising material; and iii) supporting the use of additional communication tools such as NAP knowledge-sharing networks.
- The GoR has allocated US\$15,000 for July 2014–June 2015 to conduct an institutional review for the establishment and operationalization of Rwanda’s Environment and Climate Change Innovation Centre (RECCIC). The proposed project will contribute to operationalization of the RECCIC by: i) developing – in collaboration with RECCIC – the long-term research programmes; ii) defining the role of this institution in the implementation of this research projects to inform medium- to long-term adaptation investments; and iii) developing long-term financial opportunities to maintain these programmes on the long-term.

A.1.3 The proposed alternative scenario, with a brief description of expected outcomes and components of the project.

In the alternative scenario, the proposed project will provide Rwanda with support to advance the NAP process. This will allow Rwanda to move from a project-based approach to an integrated approach for climate change adaptation. In particular, the project will establish systems to integrate priorities for adaptation to climate change into the country’s development plans. These priorities will be identified through a range of relevant measures and tools in accordance with national needs and priorities. Several initiatives related to climate change adaptation – including GEF-funded projects – have been implemented in Rwanda. The adaptation measures under these projects have focused primarily on addressing NAPA priorities while sustainably increasing local communities’ resilience to climate change. Therefore, Rwanda has already undertaken multiple steps towards adapting to climate change. However, there is a need for the GoR to advance from these initial responses towards a system for comprehensive, longer-term planning for adaptation that is integrated into social and economic development to enable medium- and long-term adaptation at the national scale. Therefore, the proposed project will advance the NAP process in Rwanda by: i) building on aligned initiatives such as the GGCRS; and ii) addressing the technical and institutional capacity gaps that will hinder the implementation of the NAP process. As a result, the project will increase the resilience of Rwanda’s population and main socio-economic sectors to the effects of climate change (see Appendix 5 for indicative activities).

Component 1: Technical and institutional capacity for the NAP process in Rwanda. Under Component 1, the proposed project will strengthen technical and institutional capacity at national and local levels to use up-to-date climate information to support the NAP process. Initially, the project will expand and strengthen Rwanda’s climate information system. This will build on the AAP project, the LDCF1 project and the future FONERWA project on climate change monitoring and EWS³⁰. First, a technical needs assessment for an effective and sustainable climate information system will be undertaken at the PPG phase. During the project implementation phase, activities will be implemented to strengthen the climate information system based on this needs assessment. Thereafter, climate information for Rwanda will be updated. Once this information has been updated, national policy documents and

³⁰ Under Component 1, monitoring equipment will potentially be provided as part of the interventions to strengthen the climate information system. This monitoring equipment will be provided if one AWS is not sufficient to inform on the climate in particularly hilly districts. In this case, a second AWS may be necessary. These AWSs cost ~ US\$15,000–US\$20,000 and it is anticipated that the project will provide approximately 6 AWSs. However, this number will be confirmed at the PPG stage.

sectoral development plans will be revised to promote an integrated approach to adaptation planning. Moreover, a strategy will be developed and established to promote implementation of an iterative revision process.

Initially, a mandate for a committee to oversee the NAP process will be developed – by building on the mandate of the existing GGCRS committee – to include tasks and responsibilities to coordinate the NAP process across all sectors. Because policy processes are particular to socio-economic and geo-climatic contexts, a comprehensive assessment of cross-sectoral and sectoral policies, strategies and plans will be undertaken to understand the existing processes for the development of these documents³¹. Based on these assessments, reports will be generated for selected cross-sectoral and sectoral policies, strategies and plans to describe: i) the vulnerability of sectors and sub-sectors to climate change and potential opportunities for adaptation; and ii) entry points for integrating adaptation to climate change into the policy process (i.e. formulation, financing, implementation and evaluation). Based on these reports, recommendations will be provided for the selected cross-sectoral and sectoral policies, strategies and plans on: i) revisions to integrate priorities for climate change adaptation; and ii) institutional arrangements to facilitate the integration process (see Appendix 5). These recommendations will be developed in consultation with the relevant institutions including MINECOFIN (see Section A.2). A strategy for periodic review of the cross-sectoral and sectoral policies, strategies and plans will also be developed and institutionalised to promote priorities for climate change adaptation that reflect the progress in advancing the NAP process. Importantly, the periodic revision process will link to the long-term research programme that will be developed under Component 2. Thereafter, training will be provided to policy- and decision-makers from all sectors including MINECOFIN on: i) the current and predicted vulnerability status of sectors and sub-sectors; ii) recommended revisions to policies, strategies, plans and institutional arrangements to integrate adaptation to climate change; and iii) the standardised approach to implementing the NAP process. Through this training process, the understanding of policy- and decision-makers on the NAP process will be enhanced. This enhanced understanding will promote the endorsement of the proposed project by these national stakeholders.

At a local level, the project will enhance awareness on the NAP process for private sector, local authorities, CSOs and local communities to promote the integration of adaptation priorities into local development. To strengthen the technical capacity of local planners, a step-by-step training manual on integrating adaptation priorities into local development will be developed. Thereafter, this manual will be disseminated to local stakeholders including key government institutions (e.g. FONERWA, MINIRENA, MINAGRI, MINECOFIN, MINALOC, MININFRA, MOH), project developers, district officers and CSOs. MINECOFIN and MINALOC are major stakeholders in this process as they are responsible for the budget revisions to support changes in strategic plans and policies across all sectors and for promoting medium- to long-term planning at all levels of government respectively.

Component 2: Funding the NAP process. Under Component 2, the funds allocated to support integrated adaptation to climate change in Rwanda will be increased. Initially, existing reports on the cost of adaptation in Rwanda will be reviewed. This review will identify gaps in information that currently prevent a reliable estimation of costs of implementing the adaptation interventions recommended under Component 1. Thereafter, a detailed economic study will be undertaken in collaboration with MINECOFIN to fill the identified information gaps. Addressing these information gaps will make possible the estimation of the costs of implementing the revised cross-sectoral and sectoral policies, strategies and plans proposed under Component 1. To assess the state of adaptation finance expenditure and management, a Climate Public Expenditure and Institutional Review (CPEIR)-type study will be conducted. The study will build on the findings of the PERECC that was conducted in 2013³². This review will: i) detail existing financial management systems; ii) total amounts of adaptation-related expenditure in Rwanda; iii) assess the institutional capacity of these systems to mobilize and channel funds for adaptation; and iv) identify and

³¹ The PERECC (2013) reports that most sectoral strategies are coming to an end. Therefore, there is an opportunity to integrate climate change into the upcoming revisions.

³² This study focussed exclusively on public expenditure. The study that will be conducted under Component 2 will include all sources of adaptation finance.

describe policy directives for climate-related expenditure³³. A preliminary review of funding allocated to adaptation shows that current amount is significantly less than required amount (see Section A.1.2 and Appendix 4). To address this funding gap, an adaptation finance strategy for an integrated approach to adaptation will be developed. The adaptation finance strategy will include: i) identify and access new sources of adaptation finance – including public, domestic/private, bilateral and multilateral sources; ii) revise the structure of the existing funding institutions – including FONERWA; and iii) effectively channel funds across sectors according to adaptation priorities. The adaptation finance strategy will also include details on how funding for climate change will be allocated within sectoral budgets, following the revisions to policies, strategies and plans recommended under Component 1. Last, the adaptation finance strategy will comprise recommendations for revisions to sectoral budgets including how domestic climate-related finances can be increased to support the NAP process³⁴. To effectively implement this strategy, the technical and institutional capacity of relevant government stakeholders – including FONERWA and MINECOFIN – will be strengthened by developing training toolkits and implementing training activities.

The funding made available through the adaptation finance strategy and sectoral budget revisions should be directed towards sustainable, best practice medium- to long-term adaptation investments. To inform the choice of appropriate adaptation investments, a long-term research programme will be established in collaboration with RECCIC, NUR, KIST, REMA and other government institutions to measure the effectiveness of past, present and future adaptation interventions for integrated, cross-sectoral adaptation. The responsibility of these institutions in implementing and maintaining the programme’s research projects will be clearly defined in an MoU. The embedment of the long-term research programme in these national institutions will ensure sustainability and continuity of the research. Knowledge generated within the long-term research programme will be used for informing long-term adaptation planning across Rwanda. Part of the long-term research programme will include *inter alia* in-depth research into how EbA – a national response to climate change that cuts across numerous sectors (e.g. natural resource management, water, agriculture) – can contribute to building climate resilience for Rwandan society in the medium- to long-term. In this regard and to address the request of the country, landscape-scale EbA pilots will be implemented specifically to inform these longer-term planning processes.

Landscape-scale restoration of degraded ecosystems is a means to achieve adaptation benefits if tailored and implemented appropriately. However, EbA through ecosystem restoration is an emerging science, less than four decades old³⁵. Consequently, intensive research and development to hone appropriate techniques for local contexts in Rwanda is required. Although existing EbA projects in Rwanda – catalysed by the NAPA – have a research component that includes long-term monitoring of the success of EbA interventions, the focus of the NAPA-catalysed EbA work has been building climate resilience of local communities³⁶. The landscape-scale EbA pilots in the proposed LDCF project will differ from the NAPA-catalysed EbA by focussing intensely on developing appropriate methods of EbA in different landscapes of Rwanda, thereby enabling effective long-term land-use planning across multiple sectors in Rwanda. These pilots will be an investment into developing EbA strategies – and medium- to long-term adaptation planning – that are appropriate and cost-effective. To develop an integrated approach to adaptation, there is a need for more analysis and learning on EbA and the conditions under which EbA is successful³⁷. As ‘national pilots for EbA planning’, the pilots will be designed to: i) identify the best restoration

³³ This review will build on the Rwanda Climate Funds Toolkit which lists all available funds per sector and details the size, mandate, types of finance, project types, decision-making structure, application procedure, and status in Rwanda including local contacts, project examples, links and the key contact for each fund (GGCRS, 2011).

³⁴ The PERECC lists strategies for improving domestic revenue in particular districts. The adaptation finance strategy will build on these strategies and include innovative ideas. For example, the following broad activities should be explored to increase domestic expenditure: i) increase climate-based taxes; ii) increase climate-based subsidies and budget allocations for these subsidies; iii) remove tax incentives that exacerbate climate change; iv) increase budget allocations and tax rebates for activities that support adaptation to climate change; and v) stipulate climate based goals as rules to govern resource allocation.

³⁵ Menz, M.H.M, Dixon, K.W. & Hobbes, R.J. 2013. Hurdles and Opportunities for Landscape-Scale Restoration. *Ecology*. 339:526-527

³⁶ For example: UNDP-UNEP LDCF project – Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in flood prone areas (2010-2014). UNEP LDCF Project – Building resilience of communities living in degraded forests, savannahs and wetlands of Rwanda through an ecosystem management approach (2015 – 2019).

³⁷ Reid, H & Alam, S.S. 2014. Approaches to adaptation: evidence from two sites in Bangladesh. IIED.

techniques for large-scale implementation, including tailoring the new ecosystem in order to maximise benefits from the ecosystem (e.g. fruits, fibre, timber, water, pollination) under climate change conditions; ii) build a rigorous business case for EbA based on proven costs and benefits; and iii) provide a proof of concept to show investors that large-scale investment in EbA is appropriate for generating income flows and/or public goods. Based on the quantified results of these landscape-scale EbA pilots, business plans and financial models will be developed to demonstrate the financial value of ecosystem goods and services generated to local communities and different sectors. These business plans will be developed in close cooperation with the private sector³⁸.

The EbA pilots will advance the NAP process by assisting policymakers to take decisions on where to prioritise EbA interventions and how to implement EbA effectively. EbA projects catalysed by the NAPA in Rwanda are being used to develop an EbA upscaling strategy, but this is only initiating the process. Developing a comprehensive EbA upscaling strategy will be a lengthy process, spanning decades, and is not a clear-cut deliverable with an end-point. The Rwandan national EbA strategy will need continual refinement by the gathering of information and undertaking pilot interventions. EbA is a complex undertaking, and Rwanda needs to arguably move forward with EbA in a spirit of adaptive management. In other words, the NAPA is just the beginning as the NAP needs to build on what the NAPA started, and focus on honing and further developing the EbA upscaling strategy.

The implementation of the landscape-scale EbA pilots will be embedded in several appropriate Rwandan research institutions (e.g. RECCIC, National University of Rwanda (NUR), Kigali Institute of Science and Technology (KIST), REMA) to ensure that the value of these pilots will be captured over decades, and used continuously in an adaptive management manner for informing development planning in Rwanda. However, the first results from these landscape-scale pilots will occur during the proposed project. These results will include, for example: i) the rates of survivorship of different species of plants and the rates of growth of these plants; and ii) the cost-benefit ratio of previous restoration projects. The ethos to be cultivated around these ‘national pilots for EbA planning’ will be a sense of planning for the future to maximise the benefits of EbA for the country as a whole. It is envisaged that Rwanda – as a ‘first-mover’ – will become a world leader in the approach of using EbA as one part of its NAP process and as part of its long-term land use planning.

Component 3: Monitoring, reviewing and knowledge sharing to learn from the NAP process in Rwanda.

Under Component 3, the capacity to monitor and review the NAP process in Rwanda will be strengthened. Therefore, indicators and targets for the NAP process will be developed for each economic sector and geographic scale. A monitoring and reviewing system for these NAP indicators and targets will then be institutionalised by building on existing M&E systems. To promote the monitoring of the NAP process beyond the lifespan of the project, guidelines and tools will be developed and training provided to government staff. These guidelines and tools will focus on, *inter alia*, data collection, analysis and dissemination of the results to monitor and review the NAP process in the long term. Training will focus on the application of these guidelines and tools to measure and report on the indicators in the monitoring and reviewing system. Additionally, the monitoring and reviewing system will include performance targets for national and local government staff. Therefore, training will also be provided to the national and local government staff who will be evaluated as part of the monitoring and reviewing system³⁹.

Under Component 3, documenting, analysing and knowledge-sharing systems will be established to continually learn from the NAP process and previous aligned national initiatives beyond the project lifespan. This will result in the regular development of reports and communication material on the successes and lessons learned from the NAP process in Rwanda. Several communication vectors will be used to disseminate this information on the successes and lesson learned will be disseminated both nationally and internationally including NAP and/or adaptation platforms, media and conferences. At the national level, the knowledge continually generated will be used to inform medium-to long-term adaptation planning through iterative NAP processes.

³⁸ An example of a financial model to be explored is the investment – by impact investors – into environmental bonds, once future purchasers of the ecosystem goods/services have been secured.

³⁹ The decision-makers of MINECOFIN will be part of the training organised under Output 3.2.

A.1.4 Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing.

Rwanda has undertaken a NAPA process to identify a list of adaptation priorities in the country. Based on the NAPA, multiple initiatives have implemented interventions to increase the resilience of Rwandan society to climate change. Moreover, the GGCRS has been developed to initiate the integration of climate change into sectoral policies. However, concrete interventions for adaptation remain localised and fragmented. Therefore, Rwanda's major economic sectors remain vulnerable to the long-term effects of climate change. The proposed project will promote an integrated approach to adaptation by building on the GGCRS and other aligned initiatives. This will be achieved by enhancing the capacity of the GoR to integrate adaptation to climate change into national development planning in a coherent and strategic manner. Therefore, the vulnerability of Rwanda's main economic sectors to the predicted effects of climate change will be reduced.

The proposed project is aligned with the LDC Expert Group's technical guidelines for the NAP process in LDCs⁴⁰. It will address gaps identified in Rwanda under each of the four elements for the formulation of NAPs, as described in the guidelines. A summary of the contributions of the proposed project to the four elements is outlined below.

- *Element A: Lay groundwork and address gaps:* Capacity gaps that would hamper the progress of the NAP process in Rwanda will be addressed by providing training to government stakeholders on integration of considerations for climate change into development planning (Component 1).
- *Element B: Preparatory elements:* LDCF resources will be used to strengthen the climate information system to develop reliable future climate scenarios in Rwanda (Component 1). The NAP process will also be advanced by integrating adaptation into cross-sectoral and sectoral policies, strategies and plans in a coherent and strategic manner (Component 1).
- *Element C: Implementation strategies:* The structure of the national fund responsible for raising and allocating external and internal resources for the environment and climate sector will be revised to increase funding allocated to adaptation to climate change. This includes the development of an adaptation finance strategy (Component 2). Additionally, a long-term research programme will be implemented to measure the benefits of adaptation options in Rwanda to inform medium- and long-adaptation investments (Component 2).
- *Element D: Reporting, monitoring and review:* A monitoring and reviewing system for the NAP process will be institutionalised by building on existing M&E systems to assess the progress and effectiveness of the NAP process in Rwanda (Component 3). The activities undertaken as part of Rwanda's NAP process will also be reviewed to produce reports and communication material on successes and lessons learned. The experience gained on advancing the NAP process in Rwanda will then be shared regionally and globally⁴¹ to contribute to international best practices on social and economic development planning that integrates climate change adaptation (Component 3).

A.1.5 Adaptation benefits (LDCF/SCCF).

Adaptation benefits: As outlined in Appendix 6, climate change adaptation in Rwanda is still restricted to addressing localised adaptation needs in a fragmented manner. The proposed project will support a transition for Rwanda towards an integrated approach to climate change adaptation. Therefore, adaptation to climate change will be implemented in a more coherent, comprehensive and systematic manner. This transition will be supported through: i) increasing the availability, access to – and use of – up-to-date climate information; ii) strengthening the capacity of the GoR to advance the NAP process through integrating climate change adaptation into relevant new and existing policies, programmes and activities, and development planning processes and strategies⁴²; iii) increasing mobilisation and allocation of funds to climate change adaptation; iv) undertaking long-term research on adaptation

⁴⁰ LDC Expert Group. (2012). *National Adaptation Plans: Technical guidelines for the national adaptation plan process.*

⁴¹ For example, at the NAP Expo and through mechanisms established by the joint UNEP-UNDP Global Support Programme on NAPs in LDCs.

⁴² LDC Expert Group (2012) The National Adaptation Process: a brief overview

interventions including *inter alia* landscape-scale EbA pilots; and v) increasing reporting and knowledge sharing on adaptation to climate change in Rwanda.

Rwanda is pioneering the implementation of the NAP process. The experience gained will be gathered, processed and disseminated to benefit other LDCs as well as non-LDCs. In addition, the landscape-scale EbA pilots will directly provide adaptation benefits. Under the long-term research programme, additional knowledge on appropriate practices for adaptation will be generated and integrated into the development of relevant sectors. Consequently, the proposed project will facilitate adaptation at both the national and global scale.

A.1.6 Innovativeness, sustainability and potential for scaling up.

- **Innovativeness:** Rwanda will be one of the first LDCs to roll out the NAP process. Consequently, innovative approaches to long-term adaptation to climate change will be adopted throughout the project implementation. For example, the proposed project includes the design of an innovative adaptation finance strategy. As part of this strategy, new sources of funds for adaptation will be identified, and access to – and use of – these funds for long-term adaptation to climate change will be facilitated. The implementation of landscape-scale EbA pilots will also generate knowledge and evidence on best adaptation practices to inform adaptation investments in the future. The evidence-based knowledge on appropriate adaptation practices will be generated by: i) looking intensely back in time to fortuitous interventions, where ecosystems have been restored several decades ago⁴³; and ii) implementing an adaptive management approach for the long-term research programme to ensure that lessons learned are continuously fed back into the EbA implementation, and the periodic revision process for policies, strategies and plans.
- **Sustainability:** The NAP process is inherently sustainable because it enables the integration of medium- to long-term climate change adaptation into the ongoing policy and planning process at national and sub-national level. Additionally, the NAP process addresses adaptation planning within the broader context of sustainable development planning.
- **Potential for scaling up:**
At the national scale: By capacitating relevant government departments within the GoR to monitor, model, forecast and disseminate climate information, the implementation of long-term adaptation interventions will be supported across all climate-vulnerable sectors and areas in Rwanda. The proposed project will also establish a long-term research programme on adaptation interventions to inform long-term adaptation investments nationally. This research will include *inter alia* landscape-scale EbA pilots.
At the global scale: The proposed project will initiate an ongoing process of iterative planning and implementation for climate change adaptation. Lessons learned from this process will be shared to support upscaling of the NAP process among other LDCs.

A.2. Stakeholders.

Main stakeholder	Relevant roles
Rwanda Environmental Management Authority (REMA)	REMA is the executing agency of the proposed project.
Rwanda Natural Resources Authority (RNRA)	RNRA will be consulted at the PPG stage to identify the capacity needs for the NAP process.
Ministry of Natural Resources	MINIRENA was consulted for the development of the PIF to discuss the

⁴³ A fortuitous intervention by a farmer in the 1970’s to restore a degraded slope has provided sufficient information for triggering large-scale landscape restoration/EbA in the Eastern Cape, South Africa. Similarly, fortuitous forest restoration interventions were undertaken in the 1800’s which now inform restoration/EbA in Brazil today. Refer to: 1) Mills, A.J. & Cowling, R.M. 2006. Rate of carbon sequestration at two thicket restoration sites in the Eastern Cape, South Africa. *Restoration Ecology*. 14, 38-49. 2) Pinto, S.R., Melo, F., Tabarelli, M., Padovesi, A., Mesquita, C.A., Scaramuzza, C.A., Castro, P. Carrascosa, H., Calmon, M. Rodrigues, R., Gomes Cesar, R. & Brancalion, P.H.S. Governing and Delivering a Biome-Wide Restoration Initiative: The Case of Atlantic forest Restoration Pact in Brazil. *Forests*. 2014. 5. 2212-2229.

(MINIRENA)	M&E systems in place. This ministry will be engaged with further to develop the implementation and training activities within the project.
National Meteorological and Hydrological Service (MET Offices) and Rwandan Climate Modelling Centre (RCMC)	Consultations with the MET Offices were held for the development of the PIF to assess the state of the climate information system. Further consultations will take place at the PPG stage to develop relevant activities.
FONERWA	FONERWA was consulted for the development of PIF, particularly Component 2. The project development team will work in close collaboration with FONERWA at the PPG and project implementation stage.
Ministry of Agriculture and Animal Resources (MINAGRI)	MINAGRI will be engaged with closely at the PPG and implementation stage for: i) needs assessments for the design of the technical and institutional capacity building; ii) selection of the policies to be revised and design of the revision process; and iii) identification of funding sources for adaptation.
Ministry of Finance and Economic Planning (MINECOFIN)	MINECOFIN is the central planning institution. Therefore, this ministry will be engaged with closely at the PPG and implementation stages for most activities. Importantly, MINECOFIN will play an integral role in: i) the revision of policy documents, sectoral development plans and budgets; ii) the assessment of financial management systems (CPEIR); and iii) the development of an adaptation finance strategy for integrated adaptation to climate change.
Ministry of Health (MOH)	MOH will be engaged with at the PPG and implementation stage for: i) needs assessments for the design of the technical and institutional capacity building; ii) selection of the policies to be revised and design of the revision process; and iii) identification of funding sources for adaptation.
Ministry of Infrastructure (MININFRA)	MININFRA will be engaged with at the PPG and implementation stage for: i) needs assessments for the design of the technical and institutional capacity building; ii) selection of the policies to be revised and design of the revision process; and iii) identification of funding sources for adaptation.
Rwanda Agricultural Research Institute (ISAR)	ISAR will be consulted at the PPG phase to design the activities related to the development of the long-term research programme for adaptation to climate change.
Provincial and District Authorities and Ministry of Local Government (MINALOC)	Local government stakeholders and MINALOC will be engaged with to: i) identify the gaps in technical capacity for the NAP process at the sub-national scale; and ii) to design the activities related to the integration of long-term adaptation into development plans.
Other UN Organisations	UNDP and ONE-UN will be engaged with to maximise the complementary between the proposed project and the NAP-related initiatives implemented by these organisations.

A.3. Gender Considerations.

Women in LDCs tend to have a lower average income and less access to education and employment opportunities than men⁴⁴. Climate change can affect men and women in different ways – adaptation efforts tend to be most effective when the gender perspectives are reflected in the interventions to manage climate risks⁴⁵. The GoR is focused on developing female leaders and promoting gender equity⁴⁶. In alignment with Rwanda’s National Gender Policy, the proposed project will identify opportunities to increase female participation in the project’s activities and

⁴⁴ Lambrou, Y., & Piana, G. (2006). Gender: the missing component of the response to climate change. Food and Agriculture Organisation, Gender and Population Division.

⁴⁵ GEF programming strategy on adaptation to climate change for the Least Developed Countries Fund and the Special Climate Change Fund (2014)

⁴⁶ The government’s commitment to gender equality is enshrined in the Rwandan Constitution and Vision 2020, Government of Rwanda.

decision-making processes. Moreover, within Component 1, the Gender Policy will be reviewed to identify entry points for promoting female participation in adaptation to climate change. The project will also monitor and report on gender mainstreaming through the development of gender-disaggregated indicators in the project's log-frame.

The opportunities will include:

- ensuring gender balance in stakeholder consultations;
- integrating gender-disaggregated indicators and targets in the results framework of the project at the PPG stage for female participation at training workshops, demonstration activities and management committees;
- ensuring that a gender analysis is integrated into the baseline study of the full project including the collection and verification of gender-disaggregated data gathered in the PPG phase;
- considering gender-differentiated vulnerabilities when identifying adaptation priorities; and
- integrating gender-disaggregated indicators in the monitoring and review system for the NAP process developed under Component 3.

A.4 Risk.

A number of key risks and mitigation measures have been identified and are presented in Table 1 below. A more thorough analysis of risks will be conducted in the PPG phase.

Identified Risks	Risk rating	Mitigation Measures
Limited coordination between government institutions prevent the NAP process from being efficiently implemented in Rwanda.	Low	<ul style="list-style-type: none"> • As a first step of the project, the role of the different institutions into the NAP process will be defined thoroughly through the organisation of workshops with the different actors and intense consultative work.
Delays in policy revision process result in delays in advancing the NAP process.	Medium	<ul style="list-style-type: none"> • Ensure most project activities are independent from the policy revisions to avoid any delay in the project implementation. • Development of a periodic revision system (3–5 years) for national policies.
Immediate needs/NAPA priorities are still too urgent for the country to move on to medium- and long-term planning for adaptation.	Medium	<ul style="list-style-type: none"> • The project will also contribute to achieving NAPA priorities (see Section B). • Rwanda is a pioneer country in the implementation of initiatives aligned with the NAP process which indicates the willingness of the country to move in this direction.
Limited government support for project implementation.	Medium	<ul style="list-style-type: none"> • Project design and implementation of activities will be aligned with the objectives of national development policies to maintain government commitment.
Theft and vandalism of climate monitoring equipment undermine accuracy of climate data.	Medium	<ul style="list-style-type: none"> • Providing training and incentives to increase awareness of local stakeholders on climate change and necessity of a climate information system to support adaptation. • Acquiring insurance for all equipment and invest in security and monitoring.
Implemented interventions are not cost-effective.	Low	<ul style="list-style-type: none"> • Inclusion of cost-effectiveness and low-regret intervention options as criteria for selection of project activities.

A.5. Coordination.

Several GEF-financed and other initiatives are linked to the proposed project (see Appendix 6), the most important of which are listed below. The design and implementation of the proposed project will benefit from the capacity, experience and knowledge generated by these ongoing initiatives. In addition, the project will analyse and compile information generated by the below-mentioned initiatives – including information on successes, failures and lessons learned – to be documented and shared under Component 3.

- UNDP-UNEP LDCF project – Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in flood prone areas (2010–2014).
- UNEP LDCF Project – Building resilience of communities living in degraded forests, savannahs and wetlands of Rwanda through an ecosystem management approach (2015–2019).
- AfDB LDCF Project – Increasing the Capacity of Vulnerable Rwandan Communities to Adapt to Adverse Effects of Climate Change: Livelihood Diversification and Investment in Rural Infrastructures (2015–2019).
- The UNEP-UNDP Poverty Environment Initiative (PEI) (2014–2018).
- World Bank Project – The Landscape Approach to Forest Restoration and Conservation (LAFREC) (2015–2018).
- The UNEP-UNDP National Adaptation Plan Global Support Programme for LDCs (2013–2015) as well as the expanded phase of this NAP GSP (2015–2019).
- PROVIA (UNEP) is a global initiative which aims to provide direction and coherence at the international level for research on vulnerability, impacts and adaptation (VIA).

B. Description of the consistency of the project with national strategies, plans and assessments under relevant conventions:

By prioritising medium- and long-term adaptation to climate change adaptation in national planning, the proposed project will support the development of a more climate-resilient economy across all economic sectors. The proposed project is consequently well aligned with:

- The **Green Growth and Climate Resilience Strategy (GGCRS)**, which is the national strategy for climate change and low carbon development.
- Rwanda’s **National Adaptation Plan of Action (NAPA)** provides a list of adaptation priorities. The proposed project will contribute to Priority 1: “Lands conservation and protection against erosion and floods at district levels of vulnerable regions to climate change” and Priority 2: “Mastering hydro meteorological information and early warning systems to control extreme phenomena due to climate change: Installation and rehabilitation of hydrological and meteorological stations”. Landscape-scale EbA pilots to hone appropriate methods of EbA in different landscapes of Rwanda (Component 2) will contribute to NAPA Priority 1. These pilots will build on the research activities already included in the existing EbA project – catalysed by the NAPA – in Rwanda. Strengthening the climate information system in the proposed project (Component 1) will contribute indirectly to NAPA Priority 2. Additionally, responding to NAPA priorities has resulted in the development of some technical and institutional capacities for adaptation. However, the NAPA priorities are largely addressed through localised project-based adaptation that build resilience to climate change beyond the projects’ lifespan. The proposed project will build on these existing capacities and further develop these capacities for medium- to long-term adaptation planning. In this way, Rwanda will be steered towards an integrated approach for adaptation. Future adaptation investments will: i) be part of a national and cross-sectoral adaptation plan; and ii) be guided by and contribute to implementing medium-to long-term adaptation practices. The proposed project will build on the NAPA-catalysed projects as described below.
 - **UNDP-UNEP LDCF project – Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in flood prone areas** (2010-2014). The objective of this project is to strengthen capacities at the national and local levels to deliver a functional early warning and disaster preparedness system. Therefore, the project interventions included the development of: i) an EWS in Gishwati ecosystem to reduce the vulnerability of local communities to extreme climate events, particularly floods; and ii) agricultural plans at the household level. The project has built capacities for risk-responsive planning at national and local levels and for the implementation of such plans. Additionally, it has also promoted the use of EbA to increase the resilience of local communities to intense flooding. Awareness raising, training and knowledge sharing on climate change and adaptation were also part of the activities. The proposed project will build onto this project by: i) contributing to filling the gaps in data monitoring material; ii) provide further training to the Met offices; and iii) developing a business plan to support long-term operation and maintenance of the climate system.
 - **UNEP LDCF Project – Building resilience of communities living in degraded forests, savannahs and wetlands of Rwanda through an ecosystem management approach** (2015–2019). To address the

problems caused by floods, droughts and landslides in Rwanda, the project will use an EbA approach to restore degraded savanna, forest and wetland ecosystems. This will reduce the climate vulnerability of local communities. The project interventions include: i) increasing the technical capacity to plan and implement EbA at national and local levels; ii) proposing revisions to national policies, strategies and plans to promote the use of EbA beyond the near-term; and iii) restoring degraded savanna, forests and wetlands to increase resilience of local communities to floods and droughts. As part of the project, the knowledge base on the effects of EbA interventions on the vulnerability of local communities to climate change will be increased through: i) conducting short-term thematic research projects; and ii) promoting long-term research projects on EbA practices. The proposed project will build on to this project by: i) proposing further revisions to policies, strategies and plans, and developing a periodic revision system for an integrated approach to adaptation; and ii) conducting landscape-scale EbA pilots to enable effective long-term land-use planning at a national scale.

- Rwanda's **Second National Communication on Climate Change** (SNC) that highlights the effects that climate change will have on the environment, economy and on human lives.
- Rwanda's primary development programme known as Vision 2020 that identifies six development pillars including: i) good governance and a capable state; and ii) human resource development and a knowledge based economy.
- Rwanda's **Second Economic Development and Poverty Reduction Strategy** (EDPRS2) (2013–2018) that addresses Rwanda's medium and long-term development challenges. The **Environmental and Climate Change Sub-Sector Strategic Plan's** (2013/14–2017/18) objectives include: i) mainstreaming environmental sustainability and climate change into all national development policies, programmes, plans and budgets; and ii) mitigation and adaption to the effects of climate change.

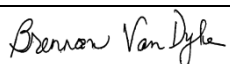
PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. Record of Endorsement⁴⁷ of GEF Operational Focal Point (S) on Behalf of the Government(s): (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Dr. Rose MUKANKOMEJE	GEF Operational Focal Point	Rwanda Environmental Management Authority (REMA)	19/09/2014

B. GEF Agency(ies) Certification

This request has been prepared in accordance with GEF policies⁴⁸ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Brennan VanDyke Director, UNEP -GEF Coordinaton Office		January 21, 2015	Ermira Fida Task Manager	+245 20 7623113	Ermira.fida@unep.org

C. Additional GEF Project Agency Certification (Applicable Only to newly accredited GEF Project Agencies)

⁴⁷ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

⁴⁸ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

For newly accredited GEF Project Agencies, please download and fill up the required **GEF Project Agency Certification of Ceiling Information Template** to be attached as an annex to the PIF.

Appendix 1: Climate change context in Rwanda

Rwanda's population was estimated to be ~12 million in July 2013⁴⁹ with a population growth rate of ~3%⁵⁰. As a result of the rapid population growth and the relatively small surface area of the country (i.e. 26,338 km²), Rwanda is currently the most densely populated country in Africa⁵¹ (i.e. 416 people km⁻²). This density of population is resulting in intense anthropogenic pressure on natural resources⁵². By the year 2050, it is predicted that Rwanda's population will grow to 26 million⁵³ with a population density of 987 people km⁻²⁵⁴. Consequently, it is anticipated that population growth will exacerbate existing socio-economic challenges related to unemployment, education, healthcare, social protection and environmental management.

Rwanda's climate is temperate to tropical and is characterised by four distinct seasons: two rainy seasons and two dry seasons. As a result of topographic variability across the country, mean annual rainfall and temperature varies spatially from east to west. Mean annual rainfall varies from 900 mm to 1,500 mm and average temperature ranges from ~20 °C to <17 °C in the western and eastern regions, respectively⁵⁵. However, temperature and rainfall data indicate that Rwanda's climate has undergone changes in recent decades. During the period from 1971–2010, the mean annual temperature in Rwanda increased by 0.35 °C per decade⁵⁶. This is greater than the mean global increase of 0.27 °C per decade recorded between 1979 and 2005⁵⁷. Rainfall records from 1931–1990 do not show a clear trend. However, data collected since 1991 indicate a decrease in mean annual rainfall. For example, the period 1991–2000 was the driest recorded period since 1961. In addition, rainfall records show an increase in the frequency of prolonged droughts since the 1980s. There is, however, a large degree of variability in inter-annual rainfall, and years of drought are interspersed by years of extremely high rainfall⁵⁸. It is anticipated that these observed changes in climate will continue in the future. Global Climate Models (GCMs) predict that Rwanda's climate will become warmer with temperature increases of up to 2.5 °C by the 2050s and up to 4 °C by the 2080s. GCM's also show an increase in mean annual rainfall of up to 20% by the 2050s, and 30% by the 2080s. In addition, extreme rainfall events are anticipated to increase in frequency.

Climate change in Rwanda is expected to have three main effects, namely: i) increased frequency of extreme flood events by up to 30% in the short rainy season (September–November) and up to 50% in the long rainy season (March–May)⁵⁹; ii) prolonged seasonal droughts recurring every two to three years; and iii) increased frequency of prolonged drought events, particularly in the southern and eastern regions of Rwanda. The effects of climate change are expected to result in multiple negative impacts on major economic sectors in Rwanda. The **agricultural sector** will be negatively affected by effects including *inter alia*: i) reduced total area of arable land as a result of soil erosion, floods and landslides; ii) reduced crop production as a result of increased temperature, increased evaporation of soil moisture and prolonged droughts; and iii) physical damage to crops and infrastructure, particularly as a result of events such as landslides and floods. The **energy sector**, which is partially reliant on the generation of hydroelectricity, will be negatively affected by: i) prolonged droughts, which will reduce water flow in rivers; and ii) frequent floods, and the resultant increase in deposition of sediment, which damage hydroelectric infrastructure and increase the cost of operation and maintenance. The **forestry sector** will be negatively affected by changing rainfall

⁴⁹ <https://www.cia.gov/library/publications/the-world-factbook/geos/rw.html>. Accessed on 15 January 2014.

⁵⁰ <https://www.cia.gov/library/publications/the-world-factbook/geos/rw.html>. Accessed on 15 January 2014.

⁵¹ <https://www.cia.gov/library/publications/the-world-factbook/geos/rw.html>. Accessed on 15 January 2014.

⁵² World Bank. 2004. Education in Rwanda: Rebalancing resources to accelerate post-conflict development and poverty reduction. London, Macmillan Press.

⁵³ UN 2011. World Population Prospects: The 2010 Revision. Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat.

⁵⁴ Rwanda. 2011. Green growth and climate resilience. National Strategy for Climate Change and Low Carbon Development.

⁵⁵ REMA. 2009. Rwanda State of the Environment Outlook Report.

⁵⁶ Rwanda. 2011. Green growth and climate resilience. National Strategy for Climate Change and Low Carbon Development.

⁵⁷ Intergovernmental Panel on Climate Change (IPCC), 2007. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Avery, M. Tignor and H.L. Miller (eds.) Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

⁵⁸ Rwanda-NAPA. 2006.

⁵⁹ Ensemble modelling with multiple coupled GCMs. See www.knmi.nl/africa_scenarios/technical.shtml for details.

regimes and increased temperature which will result in multiple negative effects including: i) increased growth rates and increased competition by alien and invasive plant species; and ii) reduced growth rates and canopy cover of indigenous or economically valuable tree species as a result of drought. Climate change will result in other indirect consequences on the forestry sector – for example, increased exploitation of forest resources by impoverished local communities is expected as a consequence of decreased agricultural production.

Rwanda's **water resources sector** will be negatively affected by climate change as a result of the reduced quality and availability of water. As described above, the negative effects on the water sector result in further consequences for other important economic sectors such as agriculture, energy production and human health. The effects of climate change will also result in negative consequences for Rwanda's **environment and biodiversity sector**, which is likely to include increased rates of ecosystem degradation and loss of biodiversity as a result of: i) higher mortality rates of plants and animals; and ii) increased exploitation of natural resources because of increasing poverty and food insecurity. Other related sectors such as health, transport and tourism will also be negatively affected by climate change.

Appendix 2: GGCRS roadmap, implementation process and timeline for mainstreaming climate change into economic sectors.

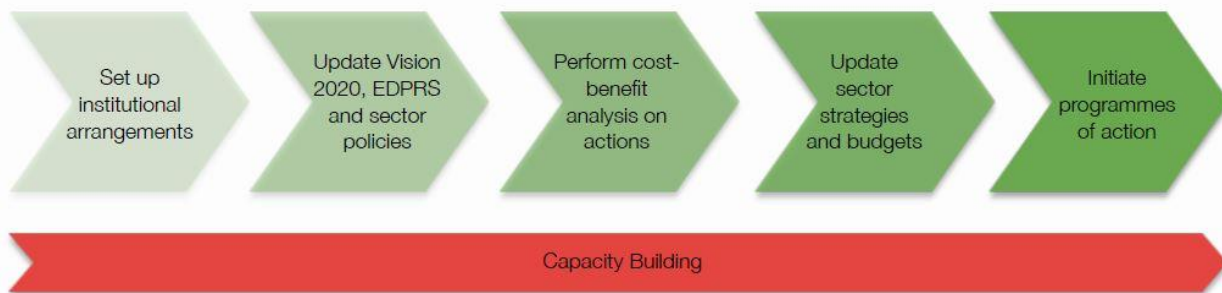


Figure 1. Roadmap for implementation of the GGCRS

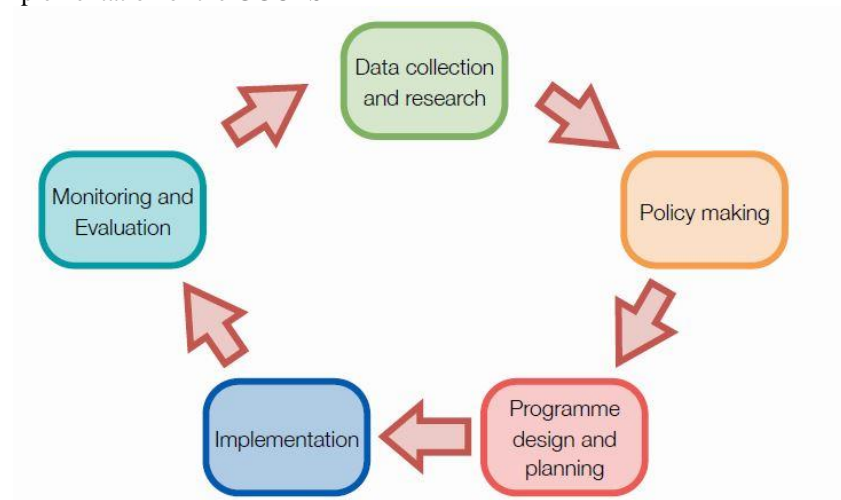


Figure 2. Ongoing (iterative process) for implementing the GGCRS.

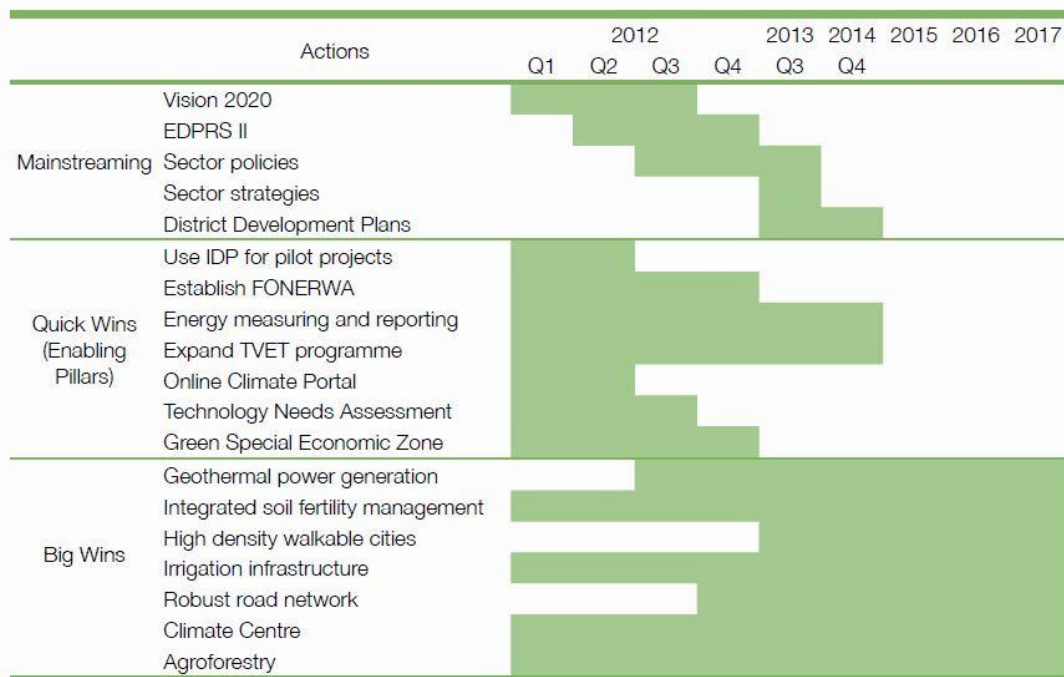


Figure 3. Timeline for mainstreaming climate change into sectors, and implementation of the quick wins and big wins.

Appendix 3: Policy and strategy review of key sectors in Rwanda

Table 1: Extent to which climate change is considered in key sectoral policies, strategies and plans in Rwanda

Sector	Title	Objective/s	Climate change considerations*	Adaptation strategies/entry points	Review date
Health	Third Health Sector Strategic Plan (July 2013 – June 2018)	<p>Overall objective: Ensure universal accessibility – in geographical and financial terms – of quality health services for all Rwandans.</p> <p>Component 1 overall objective: Improve access and quality of essential health services: Maternal, Neonatal and Child Health; Family Planning and Reproductive Health; Nutrition Services; Communicable Diseases (STD/AIDS, TB, Malaria), IDSR and Disaster Preparedness and Response (DP&R); Non-communicable Diseases; Health Communication; and Environmental Health.</p> <p>Component 2 overall objective: Strengthen policies, resources and management mechanisms of health support systems to ensure optimal performance of the health programs – output, input, and process levels.</p> <p>Component 3 overall objective: Strengthen policies, resources and management mechanisms of health services delivery systems to ensure optimal performance of the health programs – output, input, and process levels.</p> <p>Component 4 overall objective: Strengthen the Health Sector Governance mechanisms – decentralization, partnership, aid effectiveness, and financial management – to ensure optimal performance of the health sub-programs.</p>	Limited	<p>Implement activities to strengthen capacities of the MOH to identify, monitor and manage climate change related environmental health risks.</p> <p>Incorporate considerations of climate change related communicable diseases into health care strategies (e.g. increases in water- and vector-borne diseases as a result of climate change).</p> <p>Introduce emergency health preparedness for climate change related natural disasters.</p>	2018/2019
	Health Sector Policy 2014	<p>Overall objective: Ensure universal accessibility – in geographical and financial terms – of quality health services for all Rwandans.</p> <p>Specific objectives:</p> <p>i) Improve demand, access and quality of essential health services;</p> <p>ii) Strengthen policies, resources and management mechanisms of</p>	None		Unknown

		<p>health support systems to ensure optimal performance of health programs;</p> <p>iii) Strengthen policies, resources and management mechanisms of health services delivery systems to ensure optimal performance of the health programs; and</p> <p>iv) Strengthen the Health Sector Governance mechanisms – decentralization, partnership, aid effectiveness, and financial management – to ensure optimal performance of the health sub-programs.</p>			
Environment and natural resources	Five-year Strategic Plan for the Environmental and Natural Resources Sectors (2009–2013)	<p>Overall objective: To develop sustainable capacities to ensure that environment and natural resources are utilized and managed productively in support of sustainable national development in line with the EDPRS targets, MDGs and Vision 2020 aspirations.</p> <p>Specific objectives:</p> <p>i) equitable, productive and sustainable use and management of land resources;</p> <p>ii) equitable and sustainable utilization of water resources through integrated water resources management and conservation;</p> <p>iii) adequate and sustainable supply of forest and biomass resources to meet the growing multiple demands for food, fibre, fodder, fuel as well as environmental services;</p> <p>iv) promoting productive, efficient and environmentally sensitive mineral exploration and exploitation;</p> <p>v) restoring, conserving and sustainable management of ecosystems to ensure continued and enhanced functioning of critical ecosystems;</p> <p>vi) raising awareness of and integrating environmental sustainability principles in/ across all key sectors of the EDPRS;</p> <p>vii) strengthening policy and legislative frameworks for sustainable environment and natural resources management, by</p>	Limited	<p>Amend water resource management strategies to consider climate change.</p> <p>Implement sustainable land management strategies which consider climate change.</p> <p>Incorporate climate change into strategies of ecosystem conservation, improved biodiversity e.g. EbA.</p> <p>Include climate change in environmental policies and programmes across various sectors, such as: i) agriculture, livestock and fisheries; ii) transport; and iii) mining and energy.</p> <p>Incorporate climate change into strategies pertaining to the sustainable management of forest and biomass resources e.g. potential to generate carbon finance through REDD+ related</p>	2013/2014

		<p>harmonizing policies, legal and regulatory instruments within/ across sectors and with regional and international frameworks; and</p> <p>vii) increasing human and institutional capacity, at national and decentralised entities including civil society and private sector.</p>		<p>initiatives.</p> <p>Incorporate considerations of the effects of climate change on gender and youth into environmental strategies and policies e.g. consider gender and youth specific vulnerability in strategy development.</p>	
	Rwanda Environmental Policy (2003)	<p>Overall objective: The improvement of man's well-being, the judicious utilisation of natural resources and the protection and rational management of ecosystems for sustainable and fair development.</p> <p>Specific objectives:</p> <p>i) to improve the health and the quality of life for every citizen and promote sustainable socio-economic development through rational management and utilization of resources and environment;</p> <p>ii) to integrate environmental aspects into all the development policies, in planning and in all activities carried out at the national, provincial and local level, with the full participation of the population;</p> <p>iii) to conserve, preserve and restore ecosystems and maintain ecological and systems functioning, which are life supports, particularly the conservation of national biological diversity;</p> <p>iv) optimum utilization of resources and attain a sustainable level of consumption of resources;</p> <p>v) to create awareness among the public to understand and appreciate the relationship between environment and development;</p> <p>vi) to ensure the participation of individuals and the community in the activities for the improvement of environment with special attention to women and the youth; and</p> <p>vii) to ensure that the basic needs of today's population and those of future generations are met.</p>	Adequate	<p>Integration of climate change into environmental education, information and research strategies and policies e.g. include climate change into school and university curricula.</p>	Unknown
Water and	National Policy	i) raise rural water supply coverage by assisting the Districts to	Limited	Incorporate climate change	Unknown

sanitation	and Strategy for Water Supply and Sanitation Services (February 2010)	<p>plan, design, finance and implement infrastructure projects;</p> <p>ii) ensure sustainable functionality of rural water supply infrastructure by developing effective management structures;</p> <p>iii) ensure safe, reliable, financially viable and affordable urban water supply services for all;</p> <p>iv) raise household sanitation coverage to 65% by 2012 and 100% by 2020, and promote hygiene behaviour change;</p> <p>v) implement improved sanitation for schools, health facilities and other public institutions and locations;</p> <p>vi) develop safe, well-regulated and affordable off-site sanitation services for densely populated areas;</p> <p>vii) enhance storm water management to mitigate impacts on properties, infrastructure, human health and the environment;</p> <p>viii) implement integrated solid waste management; and</p> <p>ix) develop the sector's institutional and capacity building framework.</p>		<p>considerations into strategic planning and monitoring of water supply in rural and urban areas.</p> <p>Introduce climate change considerations into sanitation strategies (e.g. considering the impacts of climate change, such as floods, when designing stormwater and sanitation infrastructure).</p> <p>Introduce climate change into the sector's institutional and capacity building framework.</p>	
Agriculture and animal resources	Strategic Plan for the Transformation of Agriculture in Rwanda Phase III (2013-2017)	<p>i) transform Rwandan agriculture from a subsistence sector to a market-orientation, value-creating sector; and</p> <p>ii) to grow as rapidly as possible, both in relation to production and commercialisation, in order to increase rural incomes and reduce poverty.</p>	Extensive	Climate change considerations are extensively incorporated into the Strategic Plan.	2017/2018

***Climate change consideration categorisation**

None: No reference to climate.

Limited: References to climate change, however considerations of climate change are not integrated into policy statement/s and/or strategic actions.

Adequate: Climate change considerations evident and attempts to integrate it into one or more policy statement/s and/or strategic actions apparent.

Extensive: Climate change considerations evident and incorporated into the majority of policy statement/s and/or strategic actions.

Appendix 4: Finance flows for climate change adaptation in Rwanda

Table 1: Domestic finance flows attributed to climate change adaptation in Rwanda (in US dollars) disaggregated from the Public Expenditure Review for Environment and Climate Change for Rwanda⁶⁰.

Ministry	Programmes related to climate change adaptation	2008	2009	2010	2011	2012	Total
Ministry of Natural Resources		6,119,403	4,234,162	9,968,377	11,653,030	10,705,322	42,680,294
Ministry of Infrastructure	Weather forecasting	-	-	1,911,405	831,424	2,133,796	4,876,625
	Equipment infrastructure of treatment and forecast	-	24,710	-	-	-	24,710
	Rehabilitation of weather stations	-	18,896	-	-	-	18,896
	Promotion of weather services	-	11,628	-	-	-	11,628
Ministry of Internal Security	Risk and disaster management	111,922	23,256	103,201	200,588	222,391	661,358
Ministry of Agriculture	Sustainable management of natural resources and soil conservation	-	879,391	-	-	2,091,462	2,970,853
	Irrigation development	-	1,860,531	1,994,256	-	10,244,104	14,098,891
	Food security and vulnerability management	-	82,852	-	-	66,717	66,717
Districts	Forestry resources management	2,110,317	658,477	-	-	2,169,783	4,938,577
	Sustainable management of natural resources and soil conservation	-	455,422	-	-	-	455,422
	Food security and vulnerability management	-	82,672	-	-	-	82,672
	Irrigation development	-	-	-	-	295,879	295,879
	Integrated Water Resource Management	-	-	-	-	530,842	530,842
Total		8,341,642	8,249,145	13,977,239	12,685,042	28,460,296	71,713,364

⁶⁰ Kazoora, C. (facilitator). 2013. Public Expenditure Review for Environment and Climate Change for Rwanda, 2008-2012. United Nations Development Programme.

Table 2: International finance flows to climate change adaptation in Rwanda (in US dollars) disaggregated from the Public Expenditure Review for Environment and Climate Change for Rwanda.

Donor Agency	Period	Committed (USD)	Disbursed (USD)
European Union	2009-2014	5,422,619	5,422,619
Japan Government	2010-2013	4,846,095	2,808,170
UNDP	2010-2014	6,855,216	1,743,423
UNDP	2010-2013	109,250	164,791
Swedish International Development Agency	2011-2015	5,037,783	3,022,670
UNDP-UNEP	2010-2014	16,063,000	3,160,000
UNEP	2015-2019	16,767,000	Not applicable
World Bank	2015-2018	9,530,000	Not applicable
AfDB	2015-2019	9,904,868	Not applicable

Appendix 5: Indicative activities to be undertaken in the proposed project.

Project Objective: Enhance the capacity of Rwanda’s government to advance the National Adaptation Planning process							Indicative activities
Project Component	Grant Type⁶¹	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (US\$)	Indicative Cofinancing (US\$)	
Technical and Institutional capacity for the NAP process in Rwanda.	TA	1. Technical and institutional capacity for NAP strengthened using up-to-date climate information.	1.1. Sustainable climate information system (monitoring, modelling, forecasting and dissemination) to inform climate change adaptation, including a long-term plan for operation and maintenance.		2,235,000	2,218,272	<ul style="list-style-type: none"> - Gap analysis and needs assessment for a fully operational and sustainable climate information system in Rwanda (to be done during the PPG if possible). - Upgrade the climate information system including providing ~6 AWSs based on the results of gap analysis and needs assessment. - Develop a model for operation and maintenance of the climate information system in the long term. - Train staff from meteorological offices on using the climate monitoring equipment, using multiple sources of climate data, and the development of climate change scenarios, impact scenarios and modelling. - Update climate scenarios with new data and information.
			1.2. National policy documents and sectoral development plans revised to promote an integrated approach to adaptation planning including periodic reviews.				

⁶¹ TA includes capacity building, and research and development.

							<ul style="list-style-type: none"> - Develop and institutionalise a strategy for the periodic review of cross-sectoral and sectoral policies, strategies and plans including the integration in an iterative manner of: i) updated climate information; ii) lessons learned from the integration of climate change into these strategies and plans; iii) lessons learned from the implementation of these policies, strategies and plans; and iv) knowledge generated through the long-term research programmes implemented under Output 2.3. - Provide training for policy- and decision-makers from relevant government institutions (e.g. FONERWA, MINIRENA, MINAGRI, MINECOFIN, MINALOC, MININFRA, MOH) on: i) current vulnerability of each sub-sector; ii) recommended revisions to current policies and institutions to integrate adaptation to climate change; and iii) the standardised approach to implementing the NAP process. - Raise awareness of the private sector on the national priorities and climate scenario, and on investment opportunities to increase the resilience of businesses to climate change. - Develop and implement at least one awareness raising campaign in each province for local authorities, CSOs and local communities on the national priorities for adaptation to climate change, climate scenarios, and opportunities for integrating adaptation into local development. - Develop a step-by-step training manual for integrating adaptation priorities into local development. - Disseminate the manual to local stakeholders including province and district officers, and CSOs⁶².
			1.3. Training manuals and awareness raising events for public and private sectors, CSOs, and local communities on the NAP process.				
Funding the NAP process.	TA	2. Funding strategy for NAP established in Rwanda, including pilots to inform medium- to long-term adaptation investments.	2.1. An assessment of the costs of meeting integrated adaptation needs in Rwanda.		2,900,000	17,823,872	<ul style="list-style-type: none"> - Review reports produced on costing adaptation in Rwanda – including <i>inter alia</i> the Stockholm Environment Institute (SEI 2009) report – and identify information gaps for a reliable estimation of costs for implementing climate change adaptation in the medium and long term. - Undertake a detailed economic study to fill the information gaps and estimate the costs of implementing the adaptation interventions included in the cross-sectoral and sectoral policies, strategies and plans updated under Output 1.2. - Conduct a Climate Public Expenditure and Institutional Review (CPEIR)-type study including an assessment of: i) the existing financial management systems for adaptation to climate change; ii) total amounts of adaptation-related

⁶² Including training on writing proposals for interventions that promote integrated adaptation to climate change.

						<p>expenditure in Rwanda; iii) capacity of MINECOFIN, FONERWA and other relevant government institutions to mobilize and channel funds for adaptation; and iv) policy directives for climate-related expenditure (to be done at PPG if possible).</p>
			<p>2.2. Strategy for GoR to effectively mobilise, utilise funding resources for adaptation and revise existing funding mechanisms (FONERWA) that facilitates sustainable development.</p>			<ul style="list-style-type: none"> - Identify potential new public, private, bilateral and multilateral sources of climate finance to address the adaptation needs assessed under Output 2.1. - Develop an adaptation finance strategy to: i) access new identified sources of adaptation finance; ii) revise the structure of the existing funding institutions (FONERWA), including the development of proposed revisions to the FONERWA windows in collaboration with national stakeholders and the FONERWA management committee to integrate long-term adaptation; and iii) support effective channelling of funds across sectors according to adaptation priorities identified in Output 1.2.- - Develop training toolkits and provide training to strengthen the capacity of relevant government stakeholders (e.g. FONERWA, MINECOFIN) to initiate the implementation of the adaptation finance strategy.
			<p>2.3. Long-term research programmes including landscape-scale EbA pilots to inform future investments in adaptation across sectors.</p>			<ul style="list-style-type: none"> - Establish a long-term research programme in collaboration with RECCIC, NUR, KIST, REMA and other government institutions to measure the effectiveness of past, present and future adaptation interventions to inform long-term adaptation planning. - Identify previous and ongoing adaptation projects – including EbA and restoration – in Rwanda, building on the work of NAPA-catalysed projects, to be included in a long-term research programme. - Develop MoUs between RECCIC, NUR, KIST, REMA and other government institutions to map their responsibilities in implementing, maintaining, monitoring and sustaining landscape-scale EbA pilots to inform adaptation planning on the medium- and long-term, including the establishment of a research team/steering committee. - Select landscapes, representative of a range of ecological and socio-economic conditions, for the landscape-scale EbA pilots that would generate the most cost-effective results to maximize ecosystem services in a changing climate. - Design landscape-scale EbA pilots, based on budget available, to develop appropriate methods of EbA in different landscapes in Rwanda. - Undertake cost-benefit analyses of the landscape-scale EbA

							<p>pilots and the resulting ecosystem goods (e.g. fruits, fibre, water) and services (e.g. pollination, erosion) following an integrated approach.</p> <ul style="list-style-type: none"> - Develop business plans and financial models, working closely with the private-sector, to demonstrate the financial value of ecosystem goods and services generated by EbA to local communities and different sectors. - Design and implement a system for the dissemination of knowledge generated through the long-term research programme to a wide range of public institutions and sectors, and iteratively integrated into policies and strategies through the periodic review process established in Output 1.2. This will include the dissemination of initial results during the project lifespan.
Monitoring, reviewing and knowledge sharing to learn from the NAP process in Rwanda.	TA	3. Capacity for monitoring, reviewing and knowledge sharing to learn from the NAP process in Rwanda increased.	3.1. A monitoring and reviewing system for the NAP process based on the EDPRS and GGCRS M&E systems.	580,000	6,531,272	<ul style="list-style-type: none"> - Develop a monitoring and reviewing system for the NAP process in Rwanda including: i) milestones; ii) performance indicators at national and local levels; iii) targets on the short-, medium- and long-term; iv) outputs; v) monitoring and reviewing tools and templates; vi) assessment planning; and vii) and follow-up actions. - Institutionalize the monitoring and reviewing system for the NAP process by building on the current EDPRS and GGCRS M&E platforms of MINIRENA. 	
			3.2. Technical training of national and local government representatives to implement the monitoring and reviewing system for the NAP process developed under Output 3.1.			<ul style="list-style-type: none"> - Develop guidelines and tools for technical staff of relevant government institutions – including MINIRENA and MINAGRI – to facilitate data collection, analysis and dissemination of the results to monitor and review the NAP process over the long term. - Train technical staff of relevant government institutions – including MINIRENA and MINAGRI – on the use of these guidelines and tools to monitor and review the NAP process following the system developed in Output 3.1. - Raise awareness of national and local government stakeholders – including decision-makers, and province-, district- and sector-level officers – on the monitoring and reviewing system developed in Output 3.1, and provide training to meet the performance targets. 	
	TA	3.3. NAP progress reports and communication material on NAP formulation, implementation, funding and monitoring to learn from the NAP process in Rwanda.			<ul style="list-style-type: none"> - Document and analyse the successes, failures and lessons learned from the formulation, implementation, funding and monitoring of the NAP process and previous relevant initiatives aligned with the NAP process in Rwanda. - Disseminate information on the successes, failures and lessons learned related to the NAP process in Rwanda on national portals (e.g. the Rwanda climate portal), NAP portals and other 		

						relevant networks including NAP GSPs and UNFCCC platforms. - Implement a system for the documentation and analysis of the NAP process to be conducted on a regular basis and beyond the project lifespan, and the results to be: i) disseminated to relevant national stakeholders; ii) integrated into the monitoring and reviewing system for the NAP process; and iii) disseminated on relevant portals. - Produce and disseminate video clips on the implementation of the NAP process in Rwanda. - Present the progress of the NAP process in Rwanda during international meetings.
Subtotal					5,715,000	26,573,417
Project Management Cost (PMC) ⁶³					285,000	1,325,184
Total Project Cost					6,000,000	27,898,600

⁶³ To be calculated as percent of subtotal.

Appendix 6: GEF-financed and other initiatives linked to the project

- **UNEP-UNDP Poverty Environment Initiative (PEI)** (2014 – 2018) has the overall objective of the PEI is to mainstream environmental management and climate change considerations into development planning in Rwanda. This will be achieved by: i) strengthening the capacity of national government to integrate considerations of the environment and climate change into policies and plans; ii) strengthening national capacities for gender-sensitive planning and management of environment and poverty reduction at district and village levels; and iii) implementing training and awareness-raising activities at a local community level.
- **AfDB LDCF Project – Increasing the Capacity of Vulnerable Rwandan Communities to Adapt to Adverse Effects of Climate Change: Livelihood Diversification and Investment in Rural Infrastructures** (2015– 2019). This project will focus on: i) enhancing and diversifying climate-resilient livelihoods; ii) awareness-raising of local communities on adaptation and increasing capacity for the development of community based adaptation programmes; iii) promote small scale infrastructures that are resilient to climate change for rural market development; and iv) documenting and disseminating knowledge on adaptation practices.
- **World Bank Project – The Landscape Approach to Forest Restoration and Conservation (LAFREC)** (2015–2018) will restore and maintain degraded landscapes to enhance and diversify ecosystem services in Rwanda. This objective will be met through the following interventions: i) climate-resilient restoration of degraded forest of Gishwati-Mukura landscape, with a focus on Gishwati forest and the corridor between the Gishwati and Mukura; ii) nation-wide cross-sectoral landscape restoration planning and institutional development; and iii) research, monitoring and management.
- The **National Adaptation Plan Global Support Programme for LDCs** assist the LDCs in advancing the NAP process. The Global Support Programme on NAPs has been set up to assist countries to bring greater focus and attention to medium and long-term climate change adaptation planning as well as budgeting. Several training sessions on the NAP process have already been organised to which several government stakeholders in Rwanda participated⁶⁴.
- **PROVIA (UNEP): PROVIA** is a global initiative which aims to provide direction and coherence at the international level for research on vulnerability, impacts and adaptation (VIA). PROVIA has partnered with the on-going **National Adaptation Plan Global Support Programme for LDCs (NAP GSP)** and the LEG on supporting the VIA at the NAP context. This proposed project can make use of the partnership built with PROVIA under the NAP GSP for LDCs to better inform its technical capacity-building strategies and further testing the PROVIA guidelines ‘Supporting NAP development with the PROVIA Guidance’ developed under the NAP GSP.
- **UNDP-UNEP LDCF project – Green Climate fund (GFC) Readiness Programme.** This programme will focus on: i) specific capacity building programmes in 6 target countries; ii) the development of national project pipelines on the basis of existing and potential specific national plans and policies; and iii) the development of in-country monitoring tracking systems for climate finance and its effectiveness, together with feeding back shortcomings identified with GCF processes to support the work of the GCF board.
- **UNEP LIVE.** This portal offers a dynamic platform to collect, process and share environmental science and research. It provides a single gateway to accessing and locating country-level statistics as well as providing access to Satellite/Space Programmes such as GEOSS Portal, Earthnet Online, USGS Earth Explorer, as well as an *in situ* Programme called Argo. This portal will provide data access to both the public and policy makers using distributed networks, cloud computing, big data and improved search functions with the objective of filling gaps between data providers and consumers. UNEP LIVE will also support streamlining of national monitoring, reporting and verification of data for global and regional environmental goals.
- **Least Developed Countries Expert Group (LEG).** The objective of the LEG is to advise LDCs concerning their preparation and implementation of NAPAs. Subsequent to this, the LEG has been further involved in the development of guidelines for the NAP process in LDCs.

⁶⁴ The design of the proposed project was facilitated by the training provided by the NAP GSP project for LDCs and further informed by documents such as: i) the PROVIA Guidance on Assessing Vulnerability, Impacts and Adaptation to Climate Change; and ii) the UNFCCC Compendium on methods and tools to evaluate impacts of, and vulnerability and adaptation to, climate change.

- **Deutsche Gesellschaft für International Zusammenarbeit (GIZ).** Under the Climate Protection Programme for Developing Countries, GIZ has developed the Stocktaking for National Adaptation Planning (SNAP) tool and tools for NAP country-level training. SNAP is used to take stock of the planning capacities within a country and thereby identifies a point of departure and entry points for the NAP process.
- **The World Health Organisation (WHO).** WHO has developed a support platform providing guidance to protect health from climate change through health adaptation planning. This guidance promotes an iterative and cross-sectoral process to integrate the health risks of climate change into the NAP process. The guidance to develop a health component of the National Adaptation Plan includes vulnerability assessments, economic tools, gender, early-warning systems, indicators for health system resilience and other health sector-related NAP guidance.
- **The Global Water Partnership (GWP).** GWP is implementing a number of programmes that support NAP processes relating to water in non-LDCs, for example the *Strengthening technical skills in Africa to advance NAPs* programme. Furthermore, the GWP has established a number of platforms for knowledge sharing within the water sector.
- **Food and Agriculture Organisation (FAO).** Through *FAO-Adapt*, FAO is promoting medium-to long-term adaptation in agriculture, fisheries and forestry. FAO provides information and technical guidance – including access to a network of technical experts on genetic resources for food and agriculture – for non-LDCs to undertake the NAP process and integrate appropriate knowledge into their NAPs.
- **International Fund for Agricultural Development (IFAD).** Through the Adaptation for Smallholder Agriculture Programme (ASAP), IFAD has used climate and environmental finance to improve smallholder farmers’ access to technical information and tools.
- **UNEP Project – African Ministerial Conference on the Environment (AMCEN).** AMCEN is a forum which convenes every second year – provides African countries advocacy for environmental management as well as guidance on political events relating to environmental management.
- **The International Centre for Climate Change and Development (ICCCAD).** ICCAD supports growing capacity of Bangladesh stakeholders, while enabling international stakeholders and organisations to benefit from training in Bangladesh, where they can be exposed to the climate change adaptation and increasing knowledge from this emerging field. Courses typically run for seven days in Bangladesh where 25 participants (similar backgrounds and expertise but different nationalities, particularly Asia and Africa) receive training from three international resource people.
- **Africa Adaptation Knowledge Network (AAKNET).** AAKNET provides a platform for knowledge exchange, lessons learned and experiences through regional networks in Africa. Exchange of information on climate change adaptation between member countries is facilitated through knowledge platforms, discussion forums and communities of practice.