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Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 29-Nov-2024 | Report No: PIDIA01219

Public Disclosure Authorized

BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies)	Region	Operation ID	Operation Name
Rwanda	EASTERN AND SOUTHERN AFRICA	P507271	Ecosystem-Based Restoration Approach for Nyungwe-Ruhango Corridor
Financing Instrument	**Estimated Appraisal Date**	**Estimated Approval Date**	**Practice Area (Lead)**
Investment Project Financing (IPF)	02-Dec-2024	14-Mar-2025	Environment, Natural Resources & the Blue Economy
Borrower(s)	**Implementing Agency**	**GEF Focal Area**	
Ministry of Finance and Economic Planning	Rwanda Environment Management Authority (REMA)	Multi-focal areas	

Proposed Development Objective(s)

To restore priority ecosystems and promote sustainable landscape management in the target areas within Nyungwe-Ruhango Corridor.

Components

1. Ecosystem restoration and improved land management
2. Livelihood development and private sector opportunities
3. Policy alignment and effective planning to enable restoration
4. Effective and inclusive governance, knowledge exchange and capacity building

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)?	No
Is this project Private Capital Enabling (PCE)?	No

SUMMARY

Total Operation Cost	**9.11**
Total Financing	**9.11**

Financing Gap	**0.00**

DETAILS

Non-World Bank Group Financing

Trust Funds	9.11
Global Environment Facility (GEF)	9.11

Environmental And Social Risk Classification

Moderate

Decision

The review did authorize the team to appraise and negotiate

A. Country Context

1. **Rwanda is a low-income country that has been one of the fastest growing economies in Africa**. After averaging 8.2 percent in 2022-2023, real GDP increased by 9.7 percent in the first quarter of 2024. Robust private consumption—reflecting some improvements in employment—as well as strong investment drove the growth in 2023 and early 2024. GDP is projected to grow by around 7.7 percent over 2024–26. The agricultural sector, which has been under strain since 2022 due to adverse weather conditions and reduced usage of essential inputs like fertilizers, recovered in early 2024. For 2024 season, the volume of food crops rose by 7.8 percent compared to a decline of 3.2 percent in the same season in 2023, thanks to the use of all idle lands for agriculture. Rwanda has successfully reduced poverty in recent decades, from 60.4 percent of the population in 2000 to 38.2 percent 2017. Over the past couple of decades, the country has recorded the second-fastest GDP growth in Africa, enabled by adept governance and strategic use of developmental aid. This growth has, in turn, markedly improved the standard of living for Rwandans, as many social indicators are converging towards those of lower-middle-income countries. An emergent middle class is driving consumer demand and becoming a pivotal force in the economy, reflecting the broader socio-economic advancements. This track record underscores the nation's potential, rooted in a young demographic and fertile agricultural land.

2. **Previous growth phases heavily relied on public investment, but limited fiscal space coupled with low productivity requires a shift to private investment.** Moreover, prevailing poverty levels, alongside a significant reliance on agriculture, underscore an urgent need for transformative economic strategies to propel quality job creation and diversification. 69 percent of the population are primarily engaged in agriculture, and an average of 189,000 Rwandans entered the labor force every year for the period 2017–2022, highlighting the urgent need to

create productive jobs.[1] Lastly, the threat of climate change looms large, as evidenced by Rwanda's vulnerability to droughts and floods. Therefore, adaptive measures are imperative to mitigate the impacts of climate shocks on the economy. To this end, despite relatively low greenhouse gas emissions,[2] Rwanda has committed to reducing its Nationally Determined Contributions (NDCs) by 38 percent compared to business-as-usual (BAU) by 2030. With the revised Rwanda's Green Growth and Climate Resilience Strategy (GGCRS), it has also committed to carbon neutrality by 2050.[3]

3. **Rwanda's Country Climate and Development Report (2022) estimates that if climate risks materialize, Rwanda's GDP levels could drop by 5–7 percent below baseline in multiple years by 2050**. Droughts and floods are region-specific problems, with droughts occurring mainly in the east of the country and floods in the western, central, north, and south of the country. According to analysis from the German Climate Service Center (GERICS) of 32 Global Climate Models (GCMs), temperatures across Rwanda are expected to increase and projections show a change in annual mean temperature from 1.1°C to 3.9°C by end of the century. There is also the strong likelihood of increased duration of heatwaves by as much as 85 days through the end of the century; cold spells are also expected to reduce. Rwanda's GGCRS and its updated Nationally Determined Contribution (NDC) (May 2020) define its vision to become a developed, climate-resilient, and low-carbon economy by 2050. Rwanda's Southern Province where the project will target, have among the highest risks of landslides and exhibit some of the highest levels of poverty in the country. Climate-induced changes to the environment coupled with extreme hydrometeorological events will have adverse effects on productivity of climate-sensitive sectors. The country is already experiencing more intense and frequent rainfall, with changes in precipitation patterns predicted to increase by 5 to 10 percent (Rwanda Meteorology Agency, 2024). These shifts, along with rising temperatures, contribute to climate-induced disasters like droughts, floods, and landslides, causing infrastructure damage, loss of lives and property, soil erosion, and water pollution. Rwanda's heavy reliance on rain-fed agriculture and hydropower makes it particularly vulnerable to these changes. The average temperature in Rwanda has risen by 1.4°C since 1970, with projections indicating a further increase by the 2030s (World Bank, 2019). Increased precipitation, especially in the Western, Northern, and Southern provinces, heightens flood and landslide risks, while prolonged seasonal droughts, particularly in the east and southeast, present challenges for water management, storage, and drainage.

4. **Soil erosion is perhaps the most serious environmental problem in many catchment areas in Rwanda, due to unsustainable human activities and changes in land use.** The economic impact of topsoil loss alone is estimated at RWF 810 billion per year (RWB, IUCN, 2022), while roughly six million tons of crops, valued at US$76 million (RWF 76 billion), are lost each year due to erosion (REMA, 2022). The main factors affecting the amount of soil eroded include land use and vegetation cover, soil, climate, and, importantly, topography. It is estimated that 90% of Rwandan territory lies on slopes that present risks of soil loss, erosion and decreasing fertility. A national erosion mapping report (RWB, IUCN, 2022) found that of the 30 districts of Rwanda, 45% of land is considered high erosion risk, of which 7% is extremely high risk, 18% very high risk and 28% high risk. 48% of the total land

[1] International Finance Corporation. 2019. Country Private Sector Diagnostic.
[2] According to the GGCRS, Rwanda's total GHG emissions in its baseline year of 2015 were 5.3 million metric tons of CO2e (MtCO2e). If emissions trajectories continue to rise on a Business-as-Usual trajectory, this pathway would lead Rwanda to annual GHG emissions of 7.42 MtCO2e in 2020, 9.61 MtCO2e in 2025, and 12.1 MtCO2e in 2030.
[3] Under BAU projections, Rwanda's emissions are projected to more than double between 2015 and 2030. Its NDCs are therefore equivalent to mitigation of up to 4.6 million tCO_2e in 2030 (Updated NDC, May 2020).

at risk is considered moderate risk. This erosion risk is spatially disaggregated, the Southern Province being amongst the most susceptible to erosion risk.

5. **Over the past six decades, Rwanda's population has grown more than fivefold, from 2.6 million in 1960 to 12.9 million in 2021 (REMA, 2021), making it the most densely populated country in Africa at 503 inhabitants per square kilometer (NISR, 2023).** This dense population distribution underscores the significant pressure exerted on limited land resources and infrastructure, particularly in urban centers and densely populated rural areas. Between 1984 and 2015, a total of 235,192 ha of natural forests was lost, representing 45.27% of the forest area in 1984 (Mugabowindekwe et al, 2024). Much of this loss mirrors the long-term trend in Rwanda of more land being brought under cultivation at the expense of remaining lightly forested areas. Concurrently, poverty remains a pressing concern. Degradation of Rwanda's ecosystems is compromising their ability to provide critical services such as soil retention, flood mitigation, the provision of reliable and clean supplies of water, microclimate regulation, carbon storage (Mugabowindekwe, et al., 2023), and agricultural productivity potential. This in turn threatens the livelihoods and incomes of those who rely on them.

B. Sectoral and Institutional Context

6. **Rwanda has well-established legal and policy for governance and policies for environment, agriculture, and climate resilience.** The Vision 2050[4], the National Strategy for Transformation, NST-1 (2017-2024) and the recently approved NST-2, the 2020 revised NDC, Rwanda National Water Resources Master Plan (2015), the National Policy on Environment and Climate (2019), Wildlife Policy (2013), Rwanda Irrigation Master Plan 2020, the Environment and Natural Resources Sector Strategic Plan (2018-2024), the Strategic Plan for Agricultural Transformation (PSTA-4) (2018-2024), the Urbanization and Rural Settlement Sector Strategic Plan (2018-2024) and the Transport Sector Strategic Plan (2018-2024).

7. **Rwanda's GGCRS and its Climate and Nature Finance Strategy (CNFS) is aligned with GEF's Ecosystem Restoration Integrated Program objectives and provide the framework for mobilizing financing for ecosystem restoration in the country**. It sets the approach for mobilizing financing from public and private sectors, landscape restoration and biodiversity conservation efforts (including wetlands, afforestation, reforestation, agro-forests, etc.) to enhance degraded natural ecosystems that deliver multiple environmental and livelihood benefits. These strategies complement the National Strategy for Transformation (NST), including efforts to promote afforestation and reforestation and strengthen forest management and ensure sustainable exploitation working with private sector. The 2018 Forest Tree Policy enables private sector corporations and small landholders to play a leading role in forest management and marketing of timber and non-timber forest products and services. Innovation, learning, and application of new tools and techniques are key to maximizing benefits from limited land area available for food production and other land uses.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

[4] Rwanda has set a goal of becoming a carbon neutral and climate resilient economy by 2050. Although Rwanda's share of GHG emissions is small, agriculture, land use change, and forestry were responsible for around 62% of the country's total GHG emissions in 2020.

To restore priority ecosystems and promote sustainable landscape management in the Nyungwe-Ruhango Corridor.

Key Results

8. Key expected results[5] in the project include:
   - **PDO1 - Area of land and ecosystems under restoration (hectares - target 4,932)**. Area of land and ecosystems under restoration (hectare), which is comprised of two sub-indicators. The first, area of forest and forest land under restoration, covers reforestation and afforestation initiatives through planting on riverbanks and wetland buffer zones, which includes fruit trees and native arboreal species and the protection and restoration of remnant forests. The second sub-indicator is the area of wetlands under restoration, which will enforce buffer zones and necessary planting to deliver environmental and ecological benefits. These have been identified through an initial prioritization exercise and expert input from REMA.
   - **PDO2 - Area of landscapes under improved practices (hectares – target 83,179)**. Area of landscapes under improved practices, which will focus on land upgraded to sustainable land management practices in production systems though the construction of contour bund and bench terraces, gully rehabilitation, planting of hedgerows, agroforestry, and the installation of water harvesting structures complemented by integration of native tree species for biodiversity enhancement.
9. Outcome indicators will be prioritized for potential to contribute to national strategic sustainable landscape management initiatives and alignment to GEF's Ecosystem Restoration Impact Program. Special consideration will be made to availabiltiy of baseline data, measurability, and measurement methodologies and costs.

D. Project Description

1. **Component 1: Ecosystem restoration and improved land management.** This component will invest in prioritized areas across the landscape, with interventions targeting restoration of degraded ecosystems. Rwanda has undertaken a detailed national assessment and mapping of vulnerability and potential measures to reduce soil erosion within catchments and sub-catchments. Up to four strategically located sub-catchments will be selected to implement restoration activities in full, focused on the upper Rukarara and mid-Mwogo river catchments. This strategy is aligned with Rwanda's sustainable land management approach and will allow the effectiveness of integrated measures and their impact on the surrounding environment and local communities to be assessed. This will be complemented by wider soil conservation measures at other sites in the Ruhango, Nyanza and Nyamagabe districts and will include terracing, revegetation of buffers of water bodies, restoration of wetlands (especially the Mwogo wetland) and planting of hedgerows with the main focus of promoting native/indigenous plant species in catchment restoration. Remnant forests will also be prioritized for restoration in the broader landscape, and land cover will be enhanced by the introduction of native tree species and re-instatement of riparian buffer zones to provide riverbank protection, and conservation agriculture, such as agroforestry. Collectively these interventions are expected to reduce flooding and erosion, improve soil and water quality, provide habitats for wildlife, restore biodiversity, increase food security, and contribute to climate change mitigation. The ultimate selection and design of interventions to be implemented in different locations will be determined through more assessments informed by stakeholder consultations. Spatial mapping of the various intervention areas will be used to monitor and evaluate the performance of this component.

[5] Note that the results indicated includes both GEF8 investments and that co-financing investments in catchments associated with the broader Congo-Nile Divide landscape.

2. **Component 2: Livelihood development and private sector opportunities.** This component will deliver nature positive interventions with direct livelihood benefits as well as assessing commercial opportunities within the project landscape with potential to raise external financing for sustainable practices and scaling up. This component will seek to promote livelihood opportunities and empowerment for vulnerable groups, including women and youth. A broad suite of livelihood development opportunities were identified during project preparation and will be screened and tailored to the local context, with support provided for business development through the duration of the project. This includes the development of non-timber forest products (NTFP) opportunities to promote livelihood opportunities that do not rely on cutting down trees and rather encourage sustainable forest management. The promotion of private forestry through the devolution of sustainable practices to private sector enterprises is a key opportunity and is aligned with a national target to increase the percentage of public forest allocated to private operators set out in the National Strategy for Transformation (NST-1), and will be done in collaboration with the Rwanda Forest Authority. The promotion of agroforestry initiatives (rolled-out in Component 1) and activities such as fruit tree planting at household level will enhance livelihoods whilst creating greater potential for non-timber forest product value chains to be developed. Planting high value perennial cover crops, such as tea, in the upper catchments is another activity stakeholders view as strategic and will be considered. Collectively, prioritized measures will seek to demonstrate the commercial potential of nature positive land husbandry practices and provide an opportunity to leverage further funding to sustain and scale them. In addition, the project will provide grant funding to community organisations and local enterprises to promote sustainable livelihoods.

10. **Component 3: Policy alignment and effective planning to enable restoration.** Policy alignment and planning will underpin the successful delivery of Components 1 and 2. REMA as the executing entity of this project will ensure coherence of interventions with national policy objectives and facilitate wider promotion and adoption of interventions that prove successful, aided by engagement with key policy-level stakeholders through the project Steering Committee. Inclusive and participatory planning will form a central part of decision-making processes: local stakeholders will be actively involved in the planning of these interventions through an integrated catchment management approach that is centered around the preparation of inclusive Village Land Use Action Plans. Opportunities for ecological restoration in the project area will be screened and prioritized, and detailed restoration plans will then be prepared to guide ecological restoration efforts. Considering the long-term time horizons, ensuring that communities are adequately supported as restoration activities are implemented is vital. Targeted support will also be provided to investigate and prioritize livelihood support activities to be supported through the project, which will be aligned through the Village Land Use Action planning process. This will be informed by an understanding of different sectoral priorities and opportunities for communities to engage more meaningfully in the local economy. The activities in this Component will also be supplemented by an initial independent appraisal of barriers to and opportunities for restoration through the Restoration Diagnostic Tool designed by the Global Coordination Project of the Ecosystem Restoration Integrated Program.

11. **Component 4: Effective and inclusive governance, knowledge exchange, and capacity building to ensure successful implementation.** It will support deployment of a robust monitoring, reporting, and adaptive planning framework developed under current national efforts under the Rwanda Strategic Investment Framework for SLM will enable expedited implementation of a programmatic SLM approach. This approach is supported by a strong institutional and policy environment and a dynamic governance mechanism that allows for issues to be addressed as they arise, and to build the capacity of districts and agency teams and local communities. It will also support

the sharing of good international practices, including from other GEF-8 Ecosystem Restoration Impact Program child projects. Information gathered during delivery will be used to inform interventions and the national SLM framework as part of an adaptive management approach. Knowledge transfer will be promoted to ensure best practices and lessons on SLM and climate smart agricultural approaches are integrated into activities and result in capacity building within stakeholders. The GEF Global Coordination Project's knowledge portal, which supports information sharing across all 20 focus countries, will be a key enabling platform for this. REMA will lead on communications and outreach related to this project, including its role within the wider SLM framework, with support provided by specialists within the World Bank.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

25. The area receives a bimodal rainfall pattern, with annual precipitation varying between 1,200 and 1,600 mm. This consistent rainfall supports agricultural activities but also contributes to the challenges of soil erosion. The soils in the region are primarily acidic, with varying fertility levels depending on the specific location and land use history. In the upper catchments, the soils are typically more fertile, supporting intensive agricultural activities, while in the mid-catchments, the soils can be less fertile and more prone to degradation. Soil erosion is a significant concern, particularly on the steeper slopes, where heavy rainfall and poor land management practices exacerbate the loss of topsoil. This erosion not only reduces soil fertility but also impacts water quality in the rivers. Temperatures in the catchments generally range from 14°C to 25°C, with cooler conditions at higher elevations. The livelihood of communities has deep reliance on natural resources, making sustainable land management and soil conservation essential for maintaining both their livelihoods and the local environment. The environmental and Social risks related ecosystem restoration and improved land management can be labor-intensive correlated to occupational health and safety on manual labor workers (addressed under ESS2), community health and safety risks (addressed under ESS4), and limited pollution risk (addressed under ESS3). Risk and impacts related to the manual or light machinery assisted civil works including health and safety risk on workers and communities, dust/air pollution are expected to be site-specific, reversible, and of low magnitude that can be mitigated following appropriate measures. The project ESMF shall prescribe material measures to subprojects/activities in conformity to ESS6 to ensure negative impacts are avoided, minimized or offset (according to mitigation hierarchy) in the rehabilitation/restoration of ecosystems such as wetlands and remnant forests. The social risks under ESS1 pertain to (i) social exclusion of vulnerable groups (e.g., persons with disabilities, the elderly, women headed households and widows, children without parents etc.) to project benefits. To mitigate the project risks, the Implementing Agencies (IA), namely REMA will develop an E&S screening template, as part of the Project Environmental and Social Management Framework, which each implementing will use to assess the E&S risks of their respective project activities, and identify proportionate mitigation measures in the form of activity specific E&S management.

E. Implementation

26. The project will be implemented by REMA. REMA has current and prior experiences implementing World Bank-financed projects. Coordination across GoR agencies who have a mandate for aspects of ecosystem restoration, including RFA, RWB, and other agencies all of which provide technical support in strategic areas, may also be a challenge. To mitigate these risks, the Bank will implement GEF-8 in close collaboration with the larger VCRP techncial teams and other priority investments in the country. REMA's SPIU will play a key role collaborating with other agencies, and the Bank team will offer technical assistance and capacity building support on key aspects of project implementation. Clearly defined roles and responsibilities will be established and actively coordinated by a steering committee to provide a platform for regular coordination and decision making among the agencies. Tailor-made capacity building will be provided for communities prior and during the project implementation. In coordination with the relevant implementing institution, the necessary coordination platforms at community level will be established to ensure ownership and sustainability. Experience from other GEF-implemented projects in Rwanda, VCRP, and outside Rwanda (including Ethiopia) might also be considered.

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