Country Focus Report 2023

RWANDA

Mobilizing Private Sector Financing for Climate and Green Growth

AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE DE DÉVELOPPEMENT

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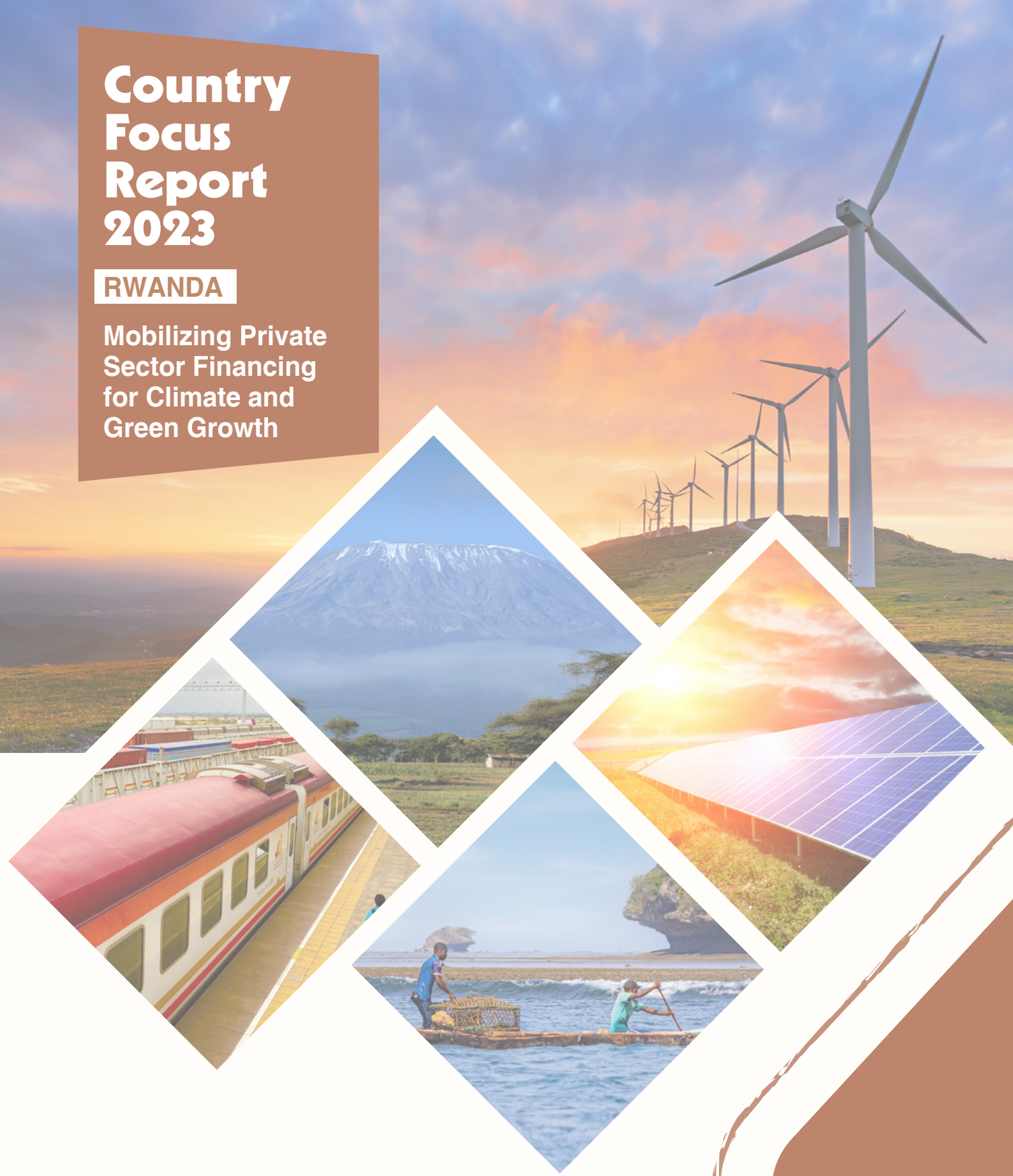

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African Development Bank Group
Avenue Joseph Anoma
01 BP 1387 Abidjan 01
Côte d'Ivoire
www.afdb.org

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The preparation of the report was led and coordinated by Ferdinand Bakoup, Acting Director, Country Economics Department, with a core team consisting of Herve Lohoues, Acting Division Manager, Country Economics Division 2 (East Africa, Nigeria, and Southern Africa); Marcellin Ndong Ntah, Lead Economist for East Africa; Walter Odero, Principal Country Economist for Rwanda, and Tricia Effe Baidoo, Staff Assistant, Country Economics Department. Internal peer review comments were received from Machokoto Michael, Research Economist/ADOA Analyst, ECMR2. Additional comments were provided by Chi Lawrence Tawah, consultant in the East Africa Regional Office led by Nnenna Nwabufo, Director General, East Africa region, and Rwanda Country Team led by Aissa Toure Sarr, Country Manager for Rwanda. Data and graphic illustrations were received from the Macroeconomics Policy, Forecasting and Research Department led by Abdoulaye Coulibaly, Director, Officer-in-Charge, Anthony Simpasa and Jaoui Fadel, Division Managers of the Macroeconomics Policy and Debt Sustainability Division and Microeconomic and Institutional Impact Assessment Division, respectively.

Jessica Omukuti (Oxford University) and Prof. Anil Markandya (Basque Centre for Climate Change) contributed background notes for the report. Tracy Tunge, Energy and Climate finance expert, Prof. Gunnar Kohlin, University of Gothenburg and Dr. Mark Ellyne former Senior Economist at IMF and Associate Professor of Economics, University of Cape Town were the external consultants, who peer reviewed the report.

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS III
TABLE OF CONTENTS IV
ACRONYMS VI
KEY MESSAGES VII
I. INTRODUCTION 1
II. RWANDA'S ECONOMIC PERFORMANCE AND OUTLOOK 3
2.1 Recent Macroeconomic and Financial Developments 3
2.2 Outlook and Risks 4
III. PRIVATE SECTOR FINANCING FOR CLIMATE AND GREEN GROWTH IN RWANDA 5
3.1 The imperative for green growth and the role of private sector financing 5
3.2 Private sector finance flows, gaps and needs for green growth and climate action in Rwanda 9
3.2.1 Current flows of finance 9
3.2.2 Private sector finance needs for the future 10
3.2.3 Emerging innovative private sector financing mechanisms for green growth and climate action 11
3.3 Opportunities and barriers for mobilising private sector finance for green growth and climate action 11
3.3.1. Opportunities for private sector investments 11
3.3.2 Barriers to private sector investments 12
3.3.3 Pathways to mobilising private sector finance for green growth and climate action in Rwanda. 13
IV. NATURAL CAPITAL FOR CLIMATE FINANCE AND GREEN GROWTH 17
4.1 The Evolution of Natural Capital 17
4.2 Opportunities for Enhancing the Contribution of Natural Capital in Rwanda 20
4.2.1 Non-Renewable Resources 20
4.2.2 Renewable Resources 20
v. CONCLUSION AND POLICY RECOMMENDATIONS 23
5.1 Conclusion 23
5.2 Policy recommendations for private sector financing for climate change and green growth 23
5.2.1 National Government 23
5.2.2 MDBs and DFIs 24
5.2.3 Domestic and international private sector 24
5.2.4 Developed country governments. 24
5.3 Policy Recommendations for increasing the contribution of natural capital to climate finance and green growth 24
REFERENCES 25
ANNEX 1: RWANDA SELECTED INDICATORS 26
Endnotes 27

LIST OF FIGURES

Figure 2.1a: Rwanda's mean GGI
Figure 2.1b: Mean and Median GGI for Rwanda and African regions
Figure 2.2: Distance to targets of green growth indicators in Rwanda, average 2010 - 2021
Figure 2.3: Upfront private investment opportunities to adapt to droughts and floods in Rwanda between 2021 and 2040 (% of GDP)
Figure 2.4: Breakdown of estimated annual private climate finance gap for African countries, both lower bound and upper bound.
Figure 4.1 : Changes in the Value of Natural Capital for African Countries, 1995-2018

LIST OF TABLES

Table 1: Macroeconomic Indicators

LIST OF BOXES

Box 1.1: Impact of Russia's invasion of Ukraine on Rwanda

LIST OF CHARTS

Chart 1 : Value Added: Mining and quarrying, 2022(e) (millions of USD)
Chart 2 : Value Added: Mining and quarrying, 2022(e) (% of GDP)

ACRONYMS

AEO	African Economic Outlook
AfDB	African Development Bank
BAU	Business-as-usual
BDS	Business Development Services
BRD	Development Bank of Rwanda
CFR	Country Focus Report
EFR	Environmental (and Climate Change) Fiscal Reform
FONERWA	Rwanda Green Growth Fund
GCF	Global Climate Finance
GGCRS	Green Growth and Climate Resiliency Strategy
GGI	Green Growth Index
GHG	Greenhouse Gas
MINECOFIN	Ministry of Finance and Economic Planning
NCA	Natural Capital Accounts
NDC	Nationally Determined Contributions
NDGAIN	Notre Dame-Global Adaptation Index
NISR	National Institute of Statistics of Rwanda
NPL	Non-Performing Loans
NLUDMP	National Land Use and Development Master Plan (2020-2050)
NST	National Strategy for Transformation
PSF	Private Sector Federation
RDB	Rwanda Development Board
REO	Regional Economic Outlook
RGIF	Rwanda Green Investment Fund
RSF	Resilience and Sustainability Facility of the IMF
SMEs	Small and medium Enterprises
UNFCCC	United Nations Framework Convention on Climate Change
WAVES	Wealth Accounting and the Valuation of Ecosystem Services

Rwanda

KEY MESSAGES

Macroeconomic Performance and Outlook

Growth should remain strong (7-8%) in the medium term and inflation should return to single digits after surging to 17.7% in 2021. The fiscal deficit and current account deficit are expected to improve in 2023-24 after deteriorating in 2022. The financial sector remains healthy.

Private sector financing for climate change and green growth

Rwanda already has a strong political commitment towards green growth and climate action. The country has made good progress in developing national green growth frameworks, roadmaps, and targets, all of which emphasise the role of the private sector in generating the finance needed to meet set targets.
Rwanda's engagement with green finance mechanisms has progressed well but is still in its infancy. This means that there is scope for Rwanda to refine policy and regulatory frameworks for mobilizing green finance, such as through green bonds, green loans, and sustainability-linked debt. Policy framework development can involve further refinement of roadmaps to guide investments into priority sectors for climate-resilient development, and to increase investor confidence in the Rwandan market.

However, mobilising additional private sector finance remains a challenge as capacity also remains low in the country. The domestic private sector remains small and limited in its ability to finance green growth-related activities. Similarly, implementation also requires the development of green skills and addressing the existing capacity gaps that limit the development of commercially viable green-growth and climate-change projects for private sector investments.

Other challenges facing the mobilisation of private sector finance at scale to meet the country's green-growth and climate-action goals relate to the high levels of external debt emerging from unaffordability of capital, the low levels of skills and capacities amongst institutions to develop and implement commercially viable green growth and climate-action projects for private sector investments.

The following actions will be needed to increase public and private sector capacity and financing for green growth and climate change:

- Under the leadership of the Rwanda Green Growth Fund (FONERWA), the government should **improve the coordination** of agencies handling the green growth and climate action agenda to ensure the timely implementation of various programs and guarantee better policy coordination.
- **Take advantage of several funds and financial instruments** available within the region and globally, and apply creative financing schemes to help enhance the widespread adoption of renewable energy.
- **Global financial institutions should engage better** with the Rwandan government to identify ways to provide affordable capital for green growth and climate change investments. This should include the use of innovative financing instruments that de-risk private sector investments.

- **Domestic and international private sectors should collaborate with the national government.** MDBs and DFIs and other private sector actors should identify key investment risks and propose ways of addressing these investment risks.
- **Developed country governments should work with MDBs and DFIs** to ensure that these institutions have sufficient capital to enable them to implement risk-agnostic measures for financing green growth and climate action in Rwanda.

Natural capital for climate finance and green growth

Natural capital in Rwanda has not grown over the last quarter century to keep pace with population and so the per capita level of such wealth remains low. In the coming years, action should be taken to prevent loss of forest ecosystems as well as harness the returns from these systems sustainably. More can also be done to exploit clean energy resources.

The channels for increasing the returns from natural capital include domestically and internationally driven actions. On the former, previous work has noted the importance of good governance in the management of the returns from natural capital and in bringing together physical and human capital to add value to exports where opportunities are available. On the latter, there is a special role for making greater use of international agreements on climate change, including those from the Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC) series and biological diversity, to finance higher returns from the substantial endowments of natural assets in Rwanda.

Work is needed on a more refined estimation of the value of renewable energy sources such as sunshine, methane gas in Lake Kivu, wind, and hydro, as well as that of landscapes and biodiversity, and tourism (especially the mountain gorillas). For example, estimates indicate that the contribution of tourism to Rwanda's GDP rose from 4.7% in 2000 to 15.1% in 2019, growing at an average rate of 7% per annum before the COVID-19 pandemic hit the industry. These data need to be refined further.

I. INTRODUCTION

This Country Focus Report (CFR) for Rwanda reviews the role of the private sector in financing of climate change and green growth. It further explores the scope for harnessing natural capital to finance adaptation and mitigation to climate change and to promote green growth. The CFR aims at the country level to replicate the analyses carried out at continental level by the African Development Bank's main African Economic Outlook (AEO) and at the regional level by the Eastern Africa Regional Economic Outlook (REO) reports for 2023.

This CFR is structured as follows. Following this Introduction, Section 2 discusses Rwanda's recent macroeconomic performance and outlook. Section 3 discusses the private sector financing of climate and green growth in Rwanda. Section 4 discusses the role of natural capital in climate finance and green growth in Rwanda. Finally, section 5 draws some policy recommendations for the government, the development partners, the domestic and international private sector, and developed country governments.

II. RWANDA'S ECONOMIC PERFORMANCE AND OUTLOOK

2.1 Recent Macroeconomic and Financial Developments

GDP growth reached 10.9% in 2021 before declining to 8.2% in 2022, due to the impacts of climate shocks on domestic food production; high energy, food, and fertilizer prices; and the effect of weak external demand on Rwandan exports. Headline inflation increased from 0.8% in 2021 to 17.7% in 2022, reflecting the increase in the cost of imported goods and low domestic food production. The decline in GDP and rising inflation and attendant drivers were largely attributed to the lingering effects of the COVID-19 pandemic, Russia's invasion of Ukraine, and the drought experienced in 2022. The policy rate was raised by 50 base points from 6.5% in November 2022 to 7% in February 2023 to reduce rising inflation. The government introduced fertilizer and public transport subsidies to prevent a spiral in the cost of living.

Overall fiscal deficit, as a share of GDP in 2022, increased to 8.8% from 8.5% in 2021, attributed to domestic revenue mobilization efforts that yielded an extra 0.2% of GDP of tax revenue, while total public debt at 77.2% in 2022 remained at moderate risk. **The current account deficit** as a share of GDP stood at 12.6% in 2022 from 10.7% in 2021 because of the high import bill at 41% of GDP in 2022. In the financial sector, banks' capital adequacy ratio at the end of September 2022 was 22.3%, well above the prudential limit of 15%, while return on average assets and average equity were 3.0% and 5.1%, respectively. Non-performing loans (NPLs) fell to 4.1% in September 2022 from 5.1% in September 2021, within the standard threshold of 6%.

Extreme poverty declined from 47% in 2019 to 45% in 2021 while the unemployment rate deteriorated to 17.9% in 2020 from 15% in 2019, with the youth unemployment rate at 22.4%, having risen from 18.2% during the previous period.

Table 1: Macroeconomic Indicators

	2018	2019	2020	2021	2022(e)	2023(p)	2024(p)
Real GDP Growth	8.6	9.4	-3.4	10.9	8.2	7.6	8.0
Real GDP Growth per Capita	6.1	7.0	-5.8	8.5	5.9	5.3	5.7
Inflation	-0.3	3.4	9.9	0.8	17.7	7.4	5.6
Overall Fiscal Balance, Including Grants (% GDP)	-6.9	-7.3	-9.0	-8.5	-8.8	-8.0	-6.8
Current Account (% GDP)	-10.1	-11.9	-12.2	-10.7	-12.6	-11.3	-10.8

Source: Data from domestic authorities; estimates (e) and prediction (p) based on authors' calculations. AfDB Statistics Department, June 2023.

Rwanda's GDP growth should remain strong around 7-8% in the medium term, well above the East Africa average, and inflation should return to single digits after surging to 17.7% in 2022.

The average economic growth rate (at constant prices) has been estimated at 7.8% per year over the 2000-2020 period while the GDP per capita increased from $268 to $816 over the same period. Maternal and child health has improved, and 12-year basic education has been made free, among other key achievements. These achievements have all contributed to improved well-being which is reflected in increased life expectancy from 51.2 years in 2002 to 69.9 years in 2022. Building on these achievements, Rwanda is making great efforts to set a new pathway that would lead to the improved living standards of an upper middle-income country by 2035 and a high-income country by 2050.

2.2 Outlook and Risks

Real GDP growth is expected to reach 7.6% and 8.0% in 2023 and 2024, respectively, on account of continued slow recovery in domestic agricultural production and exports, and conference tourism. Headline inflation is expected to slow to 7.4% in 2023 and 5.6% in 2024 due to a fall in imported inflation. **The fiscal deficit** as a share of GDP is projected to decline to 8.0% in 2023 and 6.8% in 2024 due to continued fiscal consolidation and increased domestic revenues. The country's debt risk is expected to remain moderate. **The current account deficit** as a share of GDP should improve to 11.3% in 2023 and 10.8% in 2024 because of a temporary reduction in capital imports, recovery in conference tourism, and strong remittances from the diaspora. The overall moderate economic performance is attributed to elevated **risks** from a prolonged conflict arising from Russia's invasion of Ukraine and political tensions within the Great Lakes region.

Box 1.1: Impact of Russia's invasion of Ukraine on Rwanda

Rwanda is a net importer of grain (especially wheat), fuel, and fertilizer. It was among the countries most impacted by Russia's invasion of Ukraine. The Russian invasion of Ukraine has had multifaceted impact on the Rwandan economy. The increases in energy, transport, and fertilizer prices contributed to the surge in inflation, which rose from 0.8% in 2021 to 17.7% in 2022. Despite projected quick recovery after COVID-19, output growth decelerated to 8.2% in 2022 from 10.9% in 2021, and is projected to decelerate further to 7.6% in 2023. The effect of Russia's invasion of Ukraine, have also made Rwanda one of the African countries whose debt levels deteriorated to moderate risk in 2022.

III. PRIVATE SECTOR FINANCING FOR CLIMATE AND GREEN GROWTH IN RWANDA

3.1 The imperative for green growth and the role of private sector financing

Green growth and climate action are essential if Rwanda is to achieve its national development vision of becoming an upper middle-income country by 2035 and high-income country by 2050.

Rwanda is one of the most highly vulnerable countries to climate change globally and in Africa. According to the Notre Dame-Global Adaptation Index (NDGAIN) 2020, Rwanda is one of the most climate-vulnerable countries but with relatively high readiness. The estimated climate vulnerability and climate readiness indices for Rwanda are, respectively, 57.6 and 38.6.

Having contributed to less than 0.1% to the total global historical emissions, Rwanda is disproportionately affected by extreme risks from floods and droughts which threaten development gains and risk pulling people into poverty. For example, as of 2023, more than 45% of Rwandans still lived below the poverty line, while many still lacked access to safe water and improved sanitation.

In May 2023, for example, the Western and Northern Provinces of the country were hit by heavy rains that caused floods and landslides. More than 10 districts were affected by heavy rains, floods and landslides that had a devastating impact on the health sector. Human and health infrastructures were affected, with 135 deaths, 106 injuries, and damage to 4 health facilities. Initial numbers indicate that housing and resettlement and infrastructure sectors were among the most affected. A total of 10,942 houses are known to have been affected in at least 10 districts. Some 2,740 houses were destroyed, 3,223 were partially damaged and 4,979 houses were in critical high-risk zones. Also, 20 national roads, 21 district roads and 47 bridges were damaged. A total of 8 water treatment plants and 100 water supply systems were heavily affected, leading to the disruption of water accessibility to communities. Also heavily affected were 12 power plants, 12 medium voltage lines, 9 towers, 223 low voltage poles and 50 streetlight poles. Estimated total damages were Rwf 215,315,641,113 ($190,984,974).

Addressing the drivers and effects of climate change, ensuring sustainable use of environmental resources, and addressing inequalities are conditional requirements for sustainable development and economic growth. This is the basis for green growth in Rwanda. For instance, although Rwanda has committed to reducing its greenhouse gasses (GHG) by 38% by 2030 relative to the business-as-usual (BAU) scenario, a comprehensive approach to addressing climate change also involves investments in climate change

adaptation, addressing losses and damages from climate change, investments in natural resource management and in reducing social inequalities.

Rwanda has, therefore, articulated a bold vision to become a carbon-neutral economy by 2050 with ambitious climate adaptation and mitigation interventions at a cost of $11 billion by 2030. However, Rwanda faces challenges mobilizing private sector financing due to high upfront capital needs to develop key projects, financing costs from banks, and collateral requirements. To address these challenges, Rwanda launched the Rwanda Green Investment Fund (RGIF) at the COP27, which was successfully capitalized with $104 million and has been financing project preparation and providing concessional credit facility loans and guarantees to support small and medium enterprises (SMEs) to invest in green projects. The RGIF aims to mobilize climate finance at speed and scale to finance a pipeline of innovative projects in clean energy, smart mobility, sustainable cities, climate-smart agriculture, increased forest cover, and waste and circular economy. These investments are expected to crowd in at least $364 million, create at least 372,000 jobs and contribute to the reduction of one million tons of carbon dioxide emissions by 2030.

Rwanda's engagement with green finance mechanisms has progressed well but is still in its infancy. There is scope for mobilizing more green finance through green bonds, green loans, and sustainability-linked debt.

The Nationally Determined Contributions (NDCs) and other national frameworks recognize that the private sector can play a role in catalyzing other sources of private sector finance, as well as in directing finance towards sectors and areas that are currently underfunded. All of Rwanda's policies and strategies on green growth and climate action recognize the importance of the private sector in mobilizing the resources that are needed to meet the collective goals. For instance, the first National Strategy for Transformation (2017 – 2024) - NST1 notes that implementing the different projects will require affordable capital from both the public and private sector, while the updated NDC notes that mobilization of finance will need to be from the international public and private sector to meet the annual financing needs.

Rwanda has demonstrated a strong political commitment to green growth and made considerable progress in outlining its green growth and climate action priorities.

In May 2020, Rwanda became the first African country to submit its enhanced NDC to the United Nations Framework Convention on Climate Change (UNFCCC), committing to a reduction in greenhouse gas emissions of up to 38% compared to BAU in 2030. This was equivalent to mitigation of up to 4.6 million tons of carbon dioxide estimated at a cost of $11 billion. This cost comprises $5.7 billion for mitigation and $5.3 billion for adaptation, excluding loss and damage, and other costs. On mitigation, planned measures include the use of hydroelectricity generation, proliferation of electric vehicles, use of efficient energy cooking stoves, use of solar power, and improved livestock feeds and terracing to prevent soil erosion. Strengthening climate resilience through adaptation measures prioritizes actions in water, agriculture, land, forestry, human settlement, transport health and mining. The NDC also expanded coverage of GHGs by adding hydrofluorocarbons and increased the scope of adaptation actions in key sectors such as human settlements, health, transport, and mining.

In June 2023, the country launched its revised Green Growth and Climate Resiliency Strategy (GGCRS) with areas of significant revision including Rwanda's development pathway, programme areas, enabling pillars, and the implementation roadmap. The investment required to implement the revised strategy will reach $2 billion annually, of which approximately $700 million will come from government budgets and spending, with financing to be led by the Ministry of Finance and Economic Planning (MINECOFIN) and the Rwanda Green Fund (FONERWA).

To achieve a climate-resilient and green economic future, the GGCRS is built around

four thematic programme areas: green industrialisation and trade; green urban transition and integration; sustainable land use and natural resource management; and vibrant resilient green rural livelihoods.

Within the green industrialisation and trade, it is estimated that Rwanda's green industry's value-added contribution to GDP will almost double (from 18% to 33%) over the 2020 – 2050 period. Underpinning this green industrial growth will be a concerted effort to increase and maintain the share of renewables in the energy generation mix at or above 60% from 2025 onwards. These actions will ensure a resilient and productive industrial sector enabling Rwanda to green its growth aspirations under Vision 2050.

In terms of green urban transition and integration, it is expected that half of all Rwandans will reside in urban areas by 2035 and 70% by 2050. This requires effective agglomeration of people into cities, towns, and rural settlements, linking them to green economic opportunities and climate-resilient services. The intention is for sustainable and smart development of well serviced cities, towns, and settlements, to maximize the socio-economic benefits of agglomeration while ensuring urban landscape resilience and quality of life. Ensuring compliance with Rwanda' green building compliance system and ensuring 15 square metres of green space per capita in urban areas will ensure Rwanda's cities are modern, efficient, liveable, and resilient.

Regarding sustainable land use and natural resource management, Rwanda's National Land Use and Development Master Plan (NLUDMP 2020-2050) is one of the most prioritized plans stemming from Vision 2050. The GGCRS, therefore, aligns strongly with the NLUDMP to enable the achievement of coherent, optimized, and resilient land and natural resource management to underpin Rwanda's diversified economy of the future. The revised GGCRS supports sector and integrated district land use master plans to achieve 100% alignment with the NLUDMP by 2025. The district land use plans will be integrated by linking urban and rural areas to ensure a balanced, integrated, and sustainable land use development.

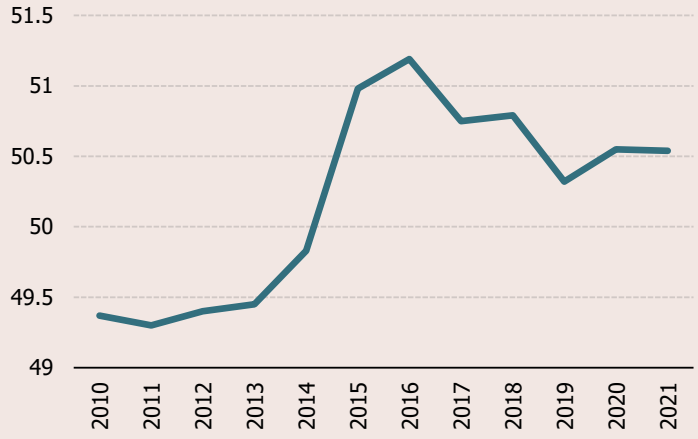
Finally, through the strong foundation of land allocation, natural resource-based tourism and agriculture can be sustainably intensified, with the value added per worker exceeding $14,000 per year by 2050. Rwanda's vibrant rural economy is, therefore, underpinned by a strong focus on resilience and social protection for rural residents. The revised GGCRS supports the provision of universal access to integrated, planned, green and clustered rural settlements for the rural population by 2050.

Rwanda's green growth index (GGI) has been relatively stable over the past 12 years.

Rwanda leads in natural capital protection in East Africa and the country's Natural Capital Accounts (NCA)[1] for land, water, minerals, and ecosystems was published by the National Institute of Statistics of Rwanda (NISR) and the Ministry of Environment, with assistance from the World Bank and the Wealth Accounting and the Valuation of Ecosystem Services (WAVES) Global Partnership, in 2018. However, data gaps affect the relevance of indicators in the Green Growth Index (GGI, 2020). As shown in Figure 2.1a below, Rwanda's mean GGI has been stable over the past 12 years.

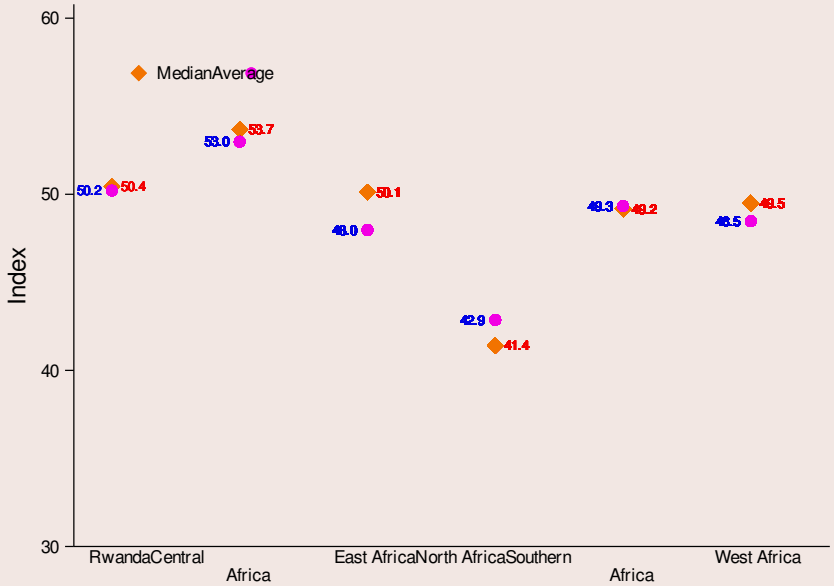
Rwanda was also one of the high performing countries on green growth between 2010 and 2021, with a mean index of 50.2 and median index of 50.4 (see Figure 2.1b). This compares favourably with the East Africa average of 48.0, Southern Africa's 49.3 and West Africa's 48.5.

Figure 2.1a: Rwanda's mean GGI



Source: AfDB staff calculations

Figure 2.1b: Mean and Median GGI for Rwanda and African regions



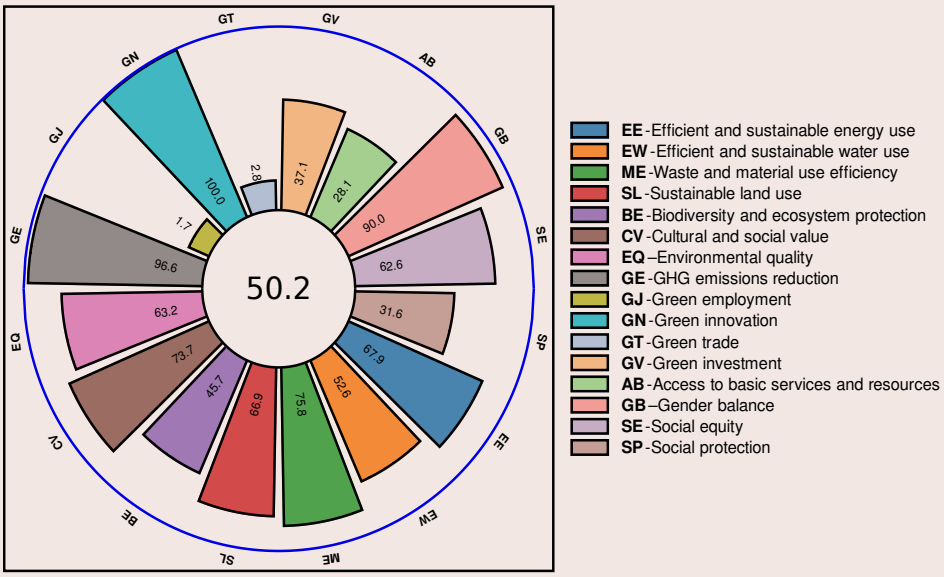
Source: AfDB staff calculations

Rwanda's GGI is mainly driven by high performance on greenhouse gas emission reduction, waste and material use efficiency, social equity, gender balance and environmental quality. The country, however, underperforms in relation to green trade and green innovation. As shown in Figure 2.2, on the dimensions of green growth, Rwanda performs well on green innovation (100) as exemplified by innovative investments in information communication technology, green cities, among others. The country also performs well in GHG emission reduction efforts (96.6) and gender balance (90.0). However, the country performs poorly in green employment (1.7), green trade (2.8) and access to basic services and resources (28.1).

For Rwanda to achieve its green growth and climate action ambitions, private sector finance will need to be mobilised at scale.

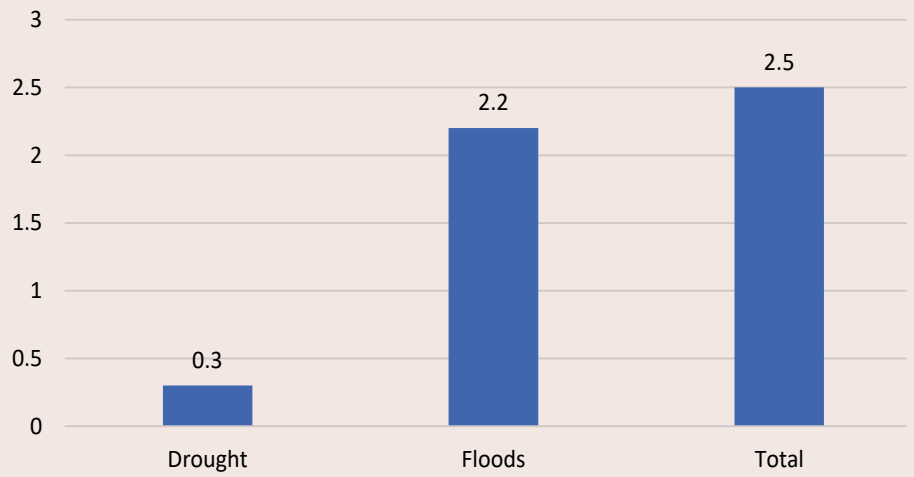
Meeting green growth and climate action needs will require modest investments. For example, AEO 2023 assessments show that simply adapting to the effects of floods and droughts in Rwanda will require more than 2.5% of Rwanda's GDP (Figure 2.3). This explains the concerted investment and resource mobilization efforts outlined in the revised GGCRS of June 2023.

Figure 2.2: Distance to targets of green growth indicators in Rwanda, average 2010 - 2021



Source: AfDB staff calculations

Figure 2.3: Upfront private investment opportunities to adapt to droughts and floods in Rwanda between 2021 and 2040 (% of GDP)



Note: Figures are expressed as a % of GDP in 2021.

Source: Bari and Dessus (2022)

3.2 Private sector finance flows, gaps and needs for green growth and climate action in Rwanda

3.2.1 Current flows of finance

The largest proportion of climate finance flows in Rwanda are public finance.

Estimates indicate that public finance per capita is about $52.5 with private finance per capita at $6.90. This implies that the Rwanda government spends more than the private sector on climate finance-related activities.

The government of Rwanda has made significant progress in establishing sector-focused funds to stimulate entrepreneurship and other private sector involvement in key green economy sectors and climate resilience building activities (such as the National Research and Innovation Fund, Agricultural Development Fund etc.). These fund opportunities are essential to encourage greater private sector and civil society participation in public development efforts, as well as to stimulate innovation from these actors toward advancing the GGCRS.

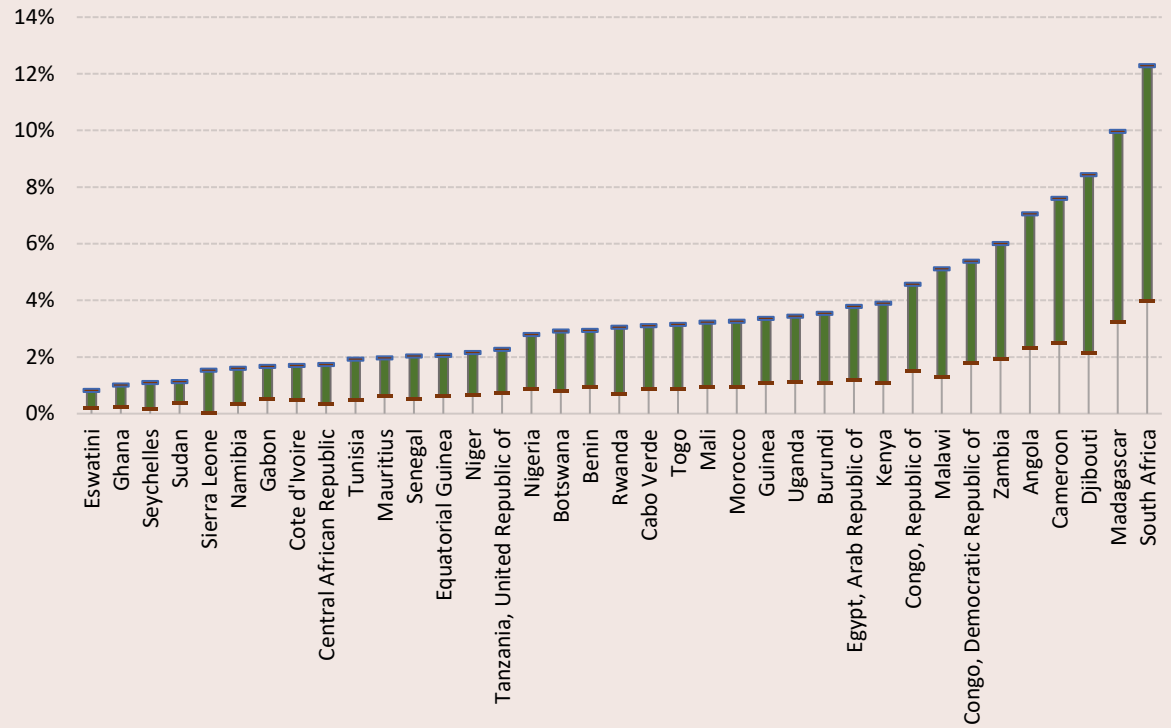
A key area of focus to support the implementation of the revised GGCRS will be increasing both the percentage of disbursements to private sector implemented projects and increasing the contributions from the private sector to the FONERWA, which has indicated an intention to increase the level of involvement of the private sector within the NST-1 implementation period. It is crucial that private finance be tapped and secured to finance green technologies in industry, especially those that increase productivity and resource-efficiency. Rwanda should explore options to raise levels of such private finance through innovative financial instruments.

3.2.2 Private sector finance needs for the future

Rwanda will need more than $2 billion annually up to 2030 to meet its climate change financing needs.

As alluded to above, the investment required to implement the revised GGCRS is $2 billion annually between 2020 and 2030, of which approximately $700 million annually will come from government budgets and spending. Given recent trends in global private climate finance flows to Rwanda, the private sector is likely to contribute 25%-75% of the climate financing needs of the country (see Figure 2.4).

Figure 2.4: Breakdown of estimated annual private climate finance gap for African countries, both lower bound and upper bound.



Source: AfDB staff calculations

Financing the revised GGCRS will be driven by FONERWA as the centrepiece of the Finance Enabling Pillar. Therefore, FONERWA will drive partnerships for leveraging additional finance from climate funds, the private sector, enhanced domestic revenues, and other innovative financing mechanisms. The RGIF under FONERWA will serve as a platform to catalyse climate finance flows to private sector actors and increase their participation in GGCRS implementation.

Through partnership between RGIF and the Development Bank of Rwanda (BRD), additional instruments for financing will include incubators, accelerators, and green guarantees. The GGCRS, therefore, recommends expediting the accreditation of BRD by the Global Climate Finance (GCF), to further expand opportunities for long-term private sector climate financing.
Further focus areas for increasing access to funding and effective spending will be improving the viability and bankability of projects prepared, as well as increasing the contributions Rwanda can offer through domestic revenue generation. The GGCRS must be used to support environmental (and climate change) fiscal reform (EFR) to support the practical implementation of the environment/climate change budget statement.

3.2.3 Emerging innovative private sector financing mechanisms for green growth and climate action

New and innovative instruments for mobilising private sector finance towards green growth and climate action in Rwanda are emerging, but their use remains constrained.

The private sector has a critical role to play in unlocking financing for climate transitions and green growth in East Africa. For example, BBOXX[2] in Rwanda provides affordable, solar-powered electricity to off-grid communities and has raised over $50 million in funding from private investors. Despite the shortfall in the mobilisation of private sector finance for green growth and climate action, Rwanda has observed an emergence of innovative mechanisms that have contributed to the available private sector finance.

In addition, a range of domestic funding sources could be relevant within Rwanda, if legislation can explicitly earmark these for FONERWA and establish the necessary institutional and regulatory arrangements. These include environment-related user fees (e.g., national park and conservation area entry fees), and tourism levies; international payments (such as debt-for-nature swaps); environmental taxes (carbon footprint off-setting fees, fossil fuel levies, mining and drilling fees, timber, and logging fees); and a portion of other major and non-environmental taxes could be earmarked for FONERWA in the national interest of mainstreaming green growth and climate resilience. These mechanisms would require strengthening coordination between MINECOFIN and FONERWA on the one hand and RDB and FONERWA on the other hand to leverage opportunities for scaling up public and private climate finance to mobilize NDC resources for climate action, among others.

3.3 Opportunities and barriers for mobilising private sector finance for green growth and climate action

3.3.1. Opportunities for private sector investments

Rwanda mobilises moderate private sector finance as compared to its peers.

In East Africa, Ethiopia, Kenya, and Rwanda have robust regulatory frameworks that have helped them to lead the region's mobilization of domestic and international private finance (CPI, 2022). Analyses carried out for the AEO 2023 found that public sector finance investments (proxied by public finance investment per capita) were a significant determinant of private sector investment.[3] With private finance per capita at $6.90, Rwanda continues to use public finance much more than other African

countries with the same level of public finance investments.

Opportunities for private sector investments in green growth and climate action in Rwanda cut across the economy.

Rwanda holds various sectoral opportunities for investments in green growth in different sectors, including infrastructure, health, education, transport, water, and other resource management. Most of these private sector investment opportunities are driven by several factors. First is the increasing population size. Rwanda's population is expected to almost double by 2050, from approximately 13.2 million in 2022[4]. Most of this population is projected to be composed of young and middle-aged urban residents. This opens investment opportunities for the private sector to invest in the provision of affordable and green urban housing and transport, food, and waste management services. These goods and services will also need to be provided in the rural areas. Digital technology has already contributed to the strengthening of the Rwandan transport sector, and further investments in this sector will be essential to meet the projected increased demand.

Rwanda's intended transition to an upper middle-income economy by 2035 also means that there will be increased demand for products such as those that provide energy for cooking and other productive uses. This is an opportunity for private sector investments to provide alternative clean fuels, such as those derived from renewable energy, to enable Rwanda to capitalise on this increasing demand while also making progress towards its green growth objectives.

Furthermore, the RGIF under FONERWA will serve as an emerging platform to catalyse climate finance flows to private sector actors and to increase their participation in GGCRS implementation. Specific actions and mechanisms to improve the effectiveness of this catalysation include:

i. Strengthening RGIF through partnership between FONERWA and BRD, as a private finance support agency, to ensure mainstreaming climate action into the financial sector in Rwanda.
ii. Unlocking the private sector to drive more resources toward the investments necessary to achieve the goals of the NDC; and
iii. Building and continuously improving partnerships, skills, and expertise to support green and climate financing in Rwanda through technical/financial support and knowledge enhancements; and broadening and diversifying financial instruments as well as measures to address current barriers to accelerating access to green and climate finance.

3.3.2 Barriers to private sector investments

a. High levels of cost of capital leading to the accumulation of unsustainable debt.

Rwanda is suffering under the weight of unaffordable capital offered by international lenders including MDBs, DFIs and other private sector lenders.

The COVID-19 pandemic, and the effects of Russia's invasion of Ukraine, have made Rwanda one of the African countries whose debt levels deteriorated to moderate risk in 2022. External debt unsustainability is driven by a high cost of lending, characterised by high interest rates and short repayment periods. Lenders' actual and perceived risks of their investments drive the high costs of borrowing, which determine interest rates. These rates are not applied uniformly and are instead calculated on a case-by-case basis.

Research shows that unaffordable capital increases rates of repayments, thus reducing the volume of public finance available for countries to use for blending finance for green growth and climate action or allocating towards green

growth and climate action priorities in alignment with NDC commitments. For Rwanda, the high cost of lending, therefore, limits the country's capacity to develop blending instruments for financing green growth and climate action, and limits the volume of investments that can be directed towards developing the basic infrastructure and conducive investment frameworks for private sector financing of green growth.

b. Low levels of skills within the country to meet green growth and climate action needs.

Rwanda lacks adequate green skills across sectors, with existing skills mostly concentrated in the renewable energy sector.

Transitions to green growth and the implementing climate-change adaptation and mitigation require green skills and capacities within key sectors. Rwanda lacks sufficient skills and capacities to realise its green growth and climate action plans. Existing skills and capacities are limited to a specific set of sectors, mostly those related to renewable energy as this is where most private sector financing is directed. The absence of adequate skills and capacities increases the risks that private sector investors and lenders attach to lending, which means that projects may not be well designed nor be sufficiently ready to be implemented on time and to completion. Skills gaps also makes Rwanda dependent on external providers, which fails to contribute to a sustained flow of financing once these external sources of skills exit. This means that Rwanda needs to focus on further deepening and expanding its skills and capacities across sectors, while at the same time promoting innovation in other sectors to attract private sector investors. This may require revising the school curriculum to ensure green skills and capacities are developed in the students.

c. Lack of meaningful coordination on green growth and climate action.

Although Rwanda has a strong national green growth and climate change policy framework, there are still gaps in coordination, particularly across different levels of governance which fails to ensure an integrated approach to the mobilisation and use of private sector finance. Additionally, although some institutions have been set up for mobilising private sector finance for green growth and climate action at the national level, these have not yet been fully operationalised. A good example is the FONERWA, established in 2012, which aims to mobilize domestic and international climate finance, and secure sustainable financing to support projects toward implementing the various green growth activities. However, due capacity limitations, this fund has not been fully operational in all regions of the country, meaning that some regions are missing out on the opportunity to streamline the allocation of climate and green growth finance towards priority sectors.

The lack of sectoral and scalar integration on green growth and climate action has led to a significantly higher allocation of private sector finance towards the energy sector and the other sectors important for progress on green growth and climate action are being left behind. Efforts to mobilise private sector finance for green growth have mostly focused on making resources available to projects in the energy sector including solar energy.

3.3.3 Pathways to mobilising private sector finance for green growth and climate action in Rwanda.

There are several pathways that Rwanda can use to unlock private sector finance for green growth and climate action. These are discussed below.

a. Deepening domestic financial markets to mobilise domestic finance for green growth.

Rwanda's domestic financial markets are expanding and could be used to mobilise

private sector finance for targeted green growth and climate action projects.

The mobilisation of private sector finance through domestic financial markets reduces currency risk. The Rwandan domestic financial markets offer opportunities towards the mobilisation of private sector finance. For instance, assessments show that Rwanda's capital markets are growing, with local pension assets rising. There is the potential that these assets can be leveraged to direct these funds towards investments in green growth sectors.
The government of Rwanda has already been issuing Treasury bonds to finance infrastructure projects and develop the local capital market, which has tapped into the domestic private sector space. However, there is still a need for concerted efforts to target these instruments towards soft infrastructure sectors and projects that directly contribute towards green growth and climate action, such as water resource use and management, health, education and innovation and technology. This means Rwanda already has a starting point for further mobilisation of private sector finance through domestic financial markets.

b. Stronger engagement with sustainable and green finance through the implementation of the policies

Already, Rwanda has developed policies for sustainable finance and what remains is their implementation.

The government established the FONERWA, which is a dedicated climate fund that mobilizes resources for green projects, provide financing to private sector investors and support climate and environmental education. The fund provides grants and concessional loans to support adaptation and mitigation projects and is also designed to attract private sector investments.

c. Ramping up the use of blended finance instruments for financing green growth and climate action

Blending of finance across sectors will need frameworks that are informed by the nature of markets in those sectors.

Rwanda is one of the countries on the continent that is leading in public finance management. For example, the country has well-functioning climate finance policy, as well as climate change policies and strategies. However, these need to be scaled out to the local levels. Rwanda has established a dedicated FONERWA to channel public and private sector investments into green growth. However, further mobilisation of private sector finance through blended finance instruments in Rwanda will require relevant regulatory frameworks for the blending of finance and the provision of technical assistance for structuring of blended finance projects.

d. Skills and capacity, particularly for the informal sector to increase innovation and engagement with key private sector.

The development of green skills and capacities needs to be integrated into existing institutions, including education institutions and innovation centres.

Based on the 2022 population and housing census report, Rwanda has serious education uptake challenges, especially at tertiary levels. Addressing the skills and capacity in Rwanda through other recent assessments also needs further integration of innovation that contributes to green growth and climate action into institutions of learning to ensure that the workforce is equipped with the skills for mobilising private sector finance. Institutions that will be essential for this are the Innovation Agency, FONERWA, basic and higher education institutions, and the Rwanda

intellectual property institutions, which must be involved in conversations on how to mainstream innovation into the education system.

e. Implementation of fiscal incentives to attract private sector investments, particularly towards other sectors that generate soft infrastructure outcomes.

Policies on appropriate fiscal incentives have already been developed at the national level in Rwanda. These need to be fully working to take advantage of the global momentum on green growth and climate action.

Rwanda has already used fiscal incentives to direct investments to key sectors, particularly the energy sector. For example, in 2022, the Rwandan government removed subsidies on petroleum products, thus making investment in clean energy much more desirable. Rwanda has also implemented power purchase agreements for renewable energy and developed feed-in tariffs for providers of clean energy to encourage private sector participation in energy provision. However, the application of these fiscal incentives is limited only to the energy sector, due to resource constraints. Meeting national green growth objectives will require incentives that apply to other economic sectors.

f. The role of MDBs and DFIs

Rwanda needs more affordable capital from MDBs and DFIs

MDBs and DFIs can play a more significant role in private sector finance mobilisation to Rwanda by increasing their risk appetite for investments, providing more affordable capital with low interest rates and longer repayment periods. Additionally, MDBs and DFIs should provide funding interventions that enable capacity development of national and local public and private sector institutions to facilitate mobilisation of private sector finance. Lastly, MDBs and DFIs can work with the Rwanda government and other key private sector actors (mainly financial institutions) to increase the country's credit rating, enabling it to acquire more affordable capital from other lenders.

g. Enhancing stakeholder collaboration

Collaborations across different stakeholders, particularly between the government and the domestic and international private sector to identify and address primary risks to investments in green growth and climate action.

Multistakeholder partnerships are important for strengthening collaboration for mobilising and using private sector finance in enabling green growth. The Rwandan government already recognises the importance of these partnerships and continues to work with private sector associations such as the Private Sector Federation – Rwanda (PSF), a professional organization, dedicated to promoting and representing the interests of the Rwandan business community. It is an umbrella organization that groups 10 professional chambers. It was established in December 1999, replacing the former Rwanda Chamber of Commerce and Industry. The PSF has registered major successes since its creation in 1999. Beyond a strong brand and membership base, PSF pioneered Business Development Services (BDS), registered wins in advocacy and played a strong national, regional, and international role. These have been instrumental in creating spaces for collaborative learning and developing strategies for the private sector involvement in financing of green growth. However, these networks and collaboration should be further strengthened so that domestic private sector can engage with international private sector, MDBs and DFIs to better understand financing needs, capacities, and existing mechanisms.

IV. NATURAL CAPITAL FOR CLIMATE FINANCE AND GREEN GROWTH

4.1 The Evolution of Natural Capital

Rwanda is endowed with rich natural resources that include iconic wildlife species, watersheds, arable lands, and minerals, among many others. The country's landscape is characterized by varied topography, from highly mountainous areas in the west, north and south, to savannah plains in the east. These diverse conditions have agro-pastoral, and agricultural livelihoods, nearly all of which are dependent on the bimodal or single rainy seasons that help shape the agro-ecological zones.

Natural capital is tracked in three groups: (a) renewable capital, consisting of forest timber, forest non-timber, mangroves, fisheries, protected areas, cropland, and pastureland; (b) non-renewable assets, separated into oil, natural gas, coal, and minerals. In addition, non-measured forms of natural wealth, such as renewable energy potential from solar, wind and hydro-resources and landscapes are also reviewed but qualitatively[1].

As seen in Charts 1 and 2 below, Rwanda is not one of the most well-endowed when it comes to non-renewable natural resource deposits, especially in mining and quarrying. In 2022, while Tanzania led in Eastern Africa with a value of $4,699 million, Sudan $3,344 million, South Sudan $2,866 million, Rwanda came in eighth position with $236.9 million. This translated to 1.9% of Rwanda's GDP in 2022, compared to South Sudan where it translated to 60% of its GDP.

Regarding renewable capital e.g., forestry and fishing potential, Rwanda is not one of the most endowed in the region with a value added of $46.4 million (0.4% of GDP) compared to Tanzania's $1,426 million (1.7% of GDP). In terms of forest cover, the country had 724,695 ha (30.4% of the country) in 2020. Rwanda has three main conservation areas: Parc National des Volcans, Akagera National Park, and Nyungwe National Park. Parc National des Volcans is known for its population of mountain gorillas, while Akagera National Park protects big game species characteristic of savannah and wetlands. Nyungwe National Park is also a protected area. The government of Rwanda has recently announced plans to expand Volcanoes National Park to accommodate the growing mountain gorilla population and improve community livelihoods. In addition to these national parks, there are also forest reserves in Rwanda. Rwanda promotes close ownership, participation, and technical support from local communities in conservation efforts. 10% of park tourism revenue is invested in the communities surrounding Rwanda's national parks. Rwanda's conservation efforts aim to maintain and expand the country's protected areas as key economic assets supporting climate-resilience and biodiversity.

The forests in Rwanda have historically played a significant role in the economy and livelihoods of its population. In 2020, the forestry sector alone contributed to 6% to the country's GDP and supported agriculture which accounted for 26% of the GDP. In addition, forests provide around 86% of the primary energy source mainly as domestic cooking energy;

[1] The World Bank data can be accessed at: Explore data (worldbank.org). The study covers 146 countries. It excludes those with no data, mainly small island states. In Africa Djibouti is the only country excluded from the list.

they hold the base for the country's tourism opportunities, which generated $498 million in 2019 and $121 million in 2020 and are targeted to increase to over $800 million by 2024. Forested catchments supply a high proportion of the water for domestic, agricultural, industrial urban and ecological needs in both upstream and downstream areas (MoE, 2020).

Chart 1 : Value Added: Mining and quarrying, 2022(e) (millions of USD)

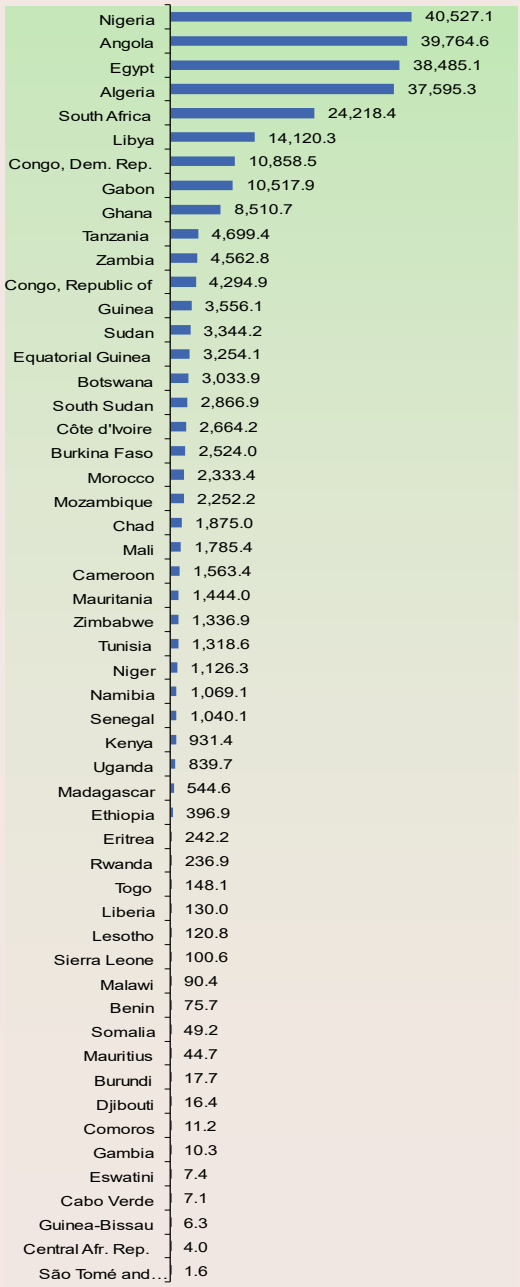
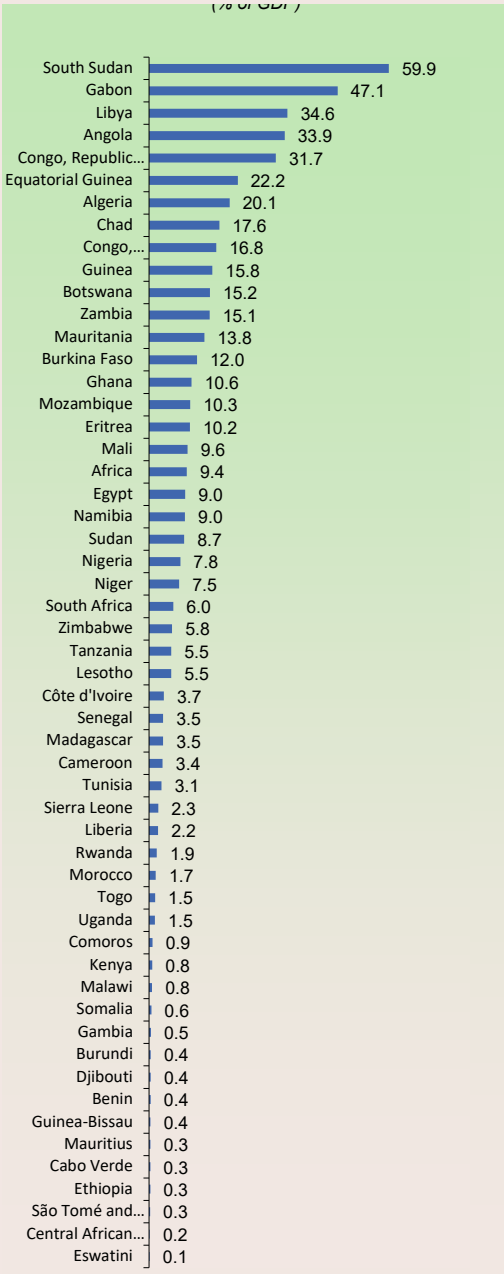


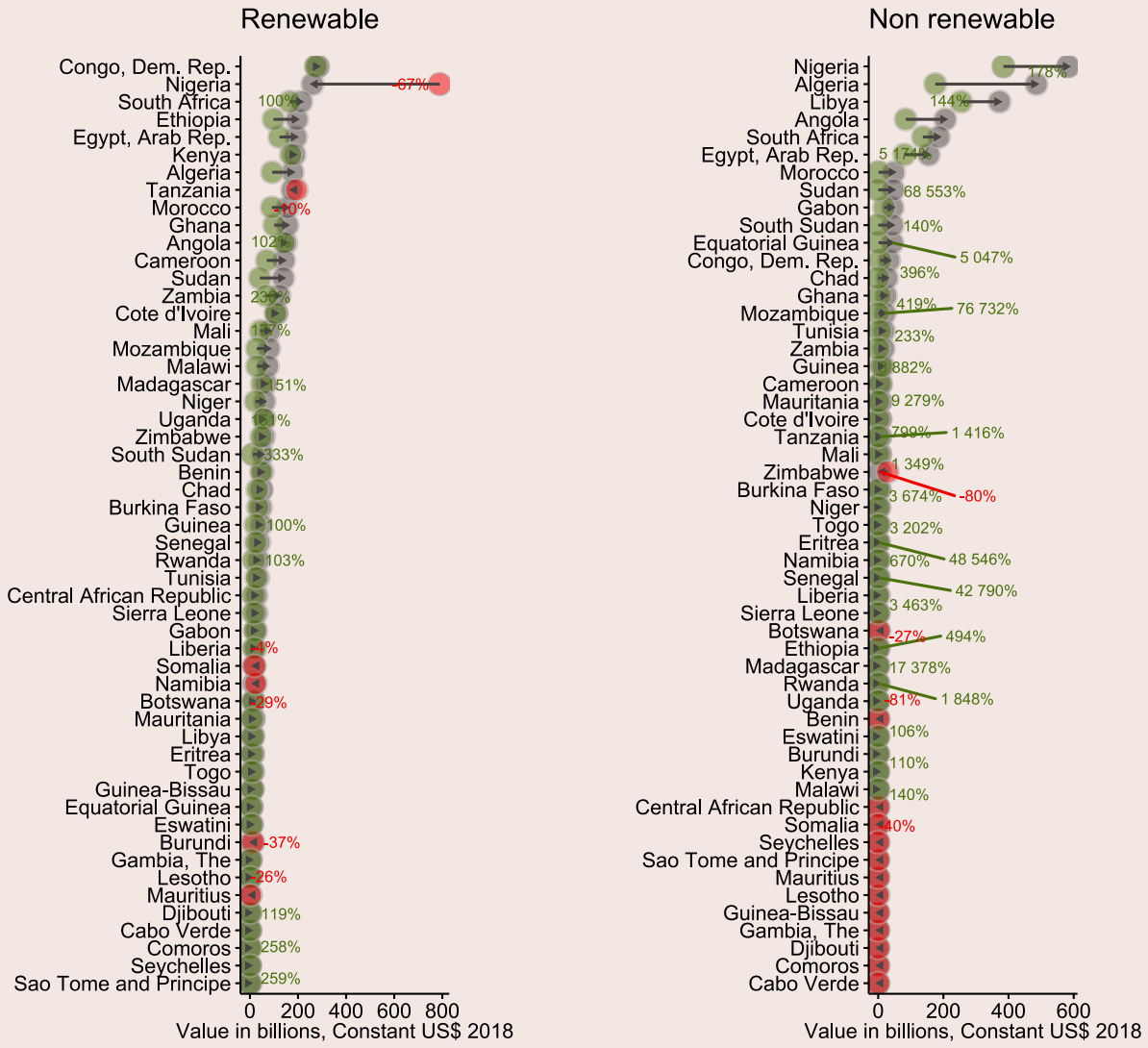
Chart 2 : Value Added: Mining and quarrying, 2022(e) (% of GDP)



In terms of evolution over time, Rwanda's value of natural capital has not changed significantly between 1995 and 2018 (Figure 4.1). However, between 2009 and 2018, Rwanda was among the countries with a high average natural capital per capita. Natural capital per capita measures the value of a society's stocks of natural assets by population. Rwanda's natural capital per capita rose from $2,726 on the average between 2009-2013 to $3,104 between 2014 to 2018. Considering that a large share of the population in Rwanda is dependent on natural

resources for their livelihoods, a reduction in the value of natural capital is expected to aggravate poverty and income inequality and increase vulnerability to climate change risks.

Figure 4.1 : Changes in the Value of Natural Capital for African Countries, 1995-2018



The AEO 2023 report noted that the categories of natural capital evaluated do not cover all sources of such capital on the continent. Rwanda benefits particularly from sunshine, wind, and hydro resources that can generate clean energy. The country also has methane gas resources, which can contribute to increasing local energy and contributing to the low-carbon pathway, provided leakages are well accounted for. The climate, together with the landscape, fauna, and flora, form a strong basis for tourism. The contribution of natural capital to the flows of goods and services from all these sources of natural wealth, however, is not estimated, resulting in the underestimation of their contribution to the economy. The contribution of tourism to Rwanda's GDP rose from 4.7% in 2000 to 15.1% in 2019, growing at an average rate of 7% per annum before the COVID-19 pandemic hit the industry. Other contributions of natural wealth, such as solar or hydro in generating electricity have not been estimated either, something that should be done as a matter of urgency.

4.2 Opportunities for Enhancing the Contribution of Natural Capital in Rwanda

The channels for increasing the returns from natural capital without damaging the base that provides these returns include both domestically and internationally driven actions. On the former, good governance is important in the management of the returns from natural capital and in bringing together physical and human capital, to add value to exports where opportunities for that are available. On the latter, there is a special role for making greater use of international agreements on climate change and biological diversity to finance higher returns from the substantial endowments of natural assets in the country that can serve the global goals in these areas.

Natural capital in Rwanda has not grown over the last quarter century to keep pace with population and so the per capita level of such wealth remains low. In the coming years, action should be taken to prevent loss of forest ecosystems and other natural resources as well as harness the returns from these systems sustainably.

The review has shown that natural capital has declined modestly in Rwanda where conservation efforts are better in per capita terms over the last quarter of a century, more so than for Africa as a whole. Measures to reverse this trend are divided into those pertaining to non-renewable natural capital and those pertaining to renewable natural capital.

4.2.1 Non-Renewable Resources

For non-renewable natural capital, the AEO 2023 report notes that revenues from the extractive sector contribute significantly to the private and public finances of many African countries. At the same time, these countries need to ensure that they receive a fair share of rents from these resources and effectively manage the revenues; the negotiated royalty rates for example are often too low. However, obtaining a "fair share" of the revenue from non-renewable resources does not guarantee economic development if the revenues are not well spent. There are issues of corruption and weak institutions in mineral-rich countries so that such countries in Africa and elsewhere in the developing world experience low growth and high poverty rates.[5]

In 2016, Rwanda began extracting methane gas from Lake Kivu, an innovative project designed to reduce the risk of a deadly spontaneous gas release while providing clean and renewable power to an energy-strapped region. Lake Kivu contains exceptionally large amounts of dissolved carbon dioxide and methane in its deep waters. These gases have accumulated over 800 to 1000 years. The carbon dioxide originates from two active volcanoes at the lake's northern side: the Nyiragongo and the Nyamuragira. These 20,000-year-old volcanoes are among the most active in the world. The methane comes from the degradation of organic matter produced at the lake's surface (representing one third of the methane produced in Lake Kivu) and the second process – which produces most of the methane in the lake – is the conversion of carbon dioxide into methane. The concentrations of carbon dioxide are five times higher than the concentrations of methane.

4.2.2 Renewable Resources

Renewable resources are at the heart of sustainable development in East Africa, Rwanda included. Several ways in which they can be exploited more effectively and yet sustainably have already been touched upon. Regarding cropland and pastureland, Rwanda has experienced a rapid subdivision of its land into small pieces given the high population density recorded at 523.03 people per square kilometre in 2022. The main effort will have to be to raise the unit value of the land, by moving up the value chain for the agrifood system.

For forests, the area has declined in most countries. The greatest was in Uganda (28%), followed by Tanzania (15%), Kenya (9%), and Rwanda (8%). Burundi saw an increase in its forest area of 19%[2]. Countries, where there has been a decline, will need to reverse it through conservation measures as well as replanting and recovery where appropriate. The AEO 2023 report proposes several steps in this regard. Governments should promote

[2] Data are from the World Bank: Forest area (sq. km) - Rwanda | Data (worldbank.org)

and enforce policies and regulations protecting forests, including protecting reserved areas and preventing illegal logging through increased enforcement and greater penalties. Sustainable forestry practices such as selective logging practices and reforestation should also be promoted by governments using instruments such as performance bonds for forest lessees. Indeed, there is evidence that some countries in the sub-region have begun to reforest in the last few years.

In terms of unit values, per hectare, these rose sharply over the 25 years to 2018 in Rwanda (3.8 times), moderately in Tanzania (by 28%), were steady in Burundi and Kenya but fell sharply in Uganda (by 31%). Policies for green growth in the countries can raise revenue from forests by both increasing the efficiency of carbon capture (as discussed earlier) and raising the price received for carbon sequestered through accessing international agreements on carbon and focusing on higher value tree crops. The AEO 2023 report noted an important channel for doing this is the creation of a single market for the trade of emissions credits (under Article 6 of the Paris International Agreement). This requires countries to participate in the market by establishing NDCs with clear mitigation targets. The gains from doing this were estimated in that report for the different sub-regions in Africa, with the finding that East Africa, Rwanda included, stood to benefit from the sale of significant amounts of such credits. At the same time as taking this route, countries in the sub-region can also increase participation in the voluntary market, where new opportunities are arising. Among these is an ambitious new Post-2020 Global Biodiversity Framework, to scale up ecosystem restoration, reduce the extinction risk of species, and protect 30% of land, freshwater and marine areas by 2030. The AEO 2023 report notes that for Africa, Rwanda included, to benefit from such arrangements, an Africa Biodiversity Fund may need to be established to attract private capital.

Regarding other forms of natural capital, the roles of fisheries and landscapes (for tourism) have been noted. For fisheries, Rwanda has potential in the many small lakes and rivers, and there is potential conflict with landscapes especially around Lake Kivu.

To exploit landscapes more effectively for tourism, Rwanda is looking to develop ecotourism further. The AEO 2023 report notes that the potential for ecotourism in Africa is significant but not fully realized. For Rwanda, there is great potential to expand investments in the Volcanoes National Park, the Akagera National Park, the Nyungwe National Park, among others[6]. A high-altitude tropical rainforest may sound unexpected, but Rwanda is home to one of Africa's last remaining high-altitude tropical rainforests, situated in Nyungwe Forest National Park.

Other means for making natural capital more productive in Rwanda could focus on capturing more value in the goods and services generated by the natural capital. While the Rwanda Development Board (RDB)[7] attempts to do this by enforcing local content requirements in products, success remains low, and there are opportunities for increasing value added through strategic partnerships with state-owned enterprises and foreign investors. Apart from local content, AEO 2023 also recommends countries to explore franchising agreements with foreign firms to complement existing local content policies and requirements, especially where capacity (both technical and financial) is lacking. Recent studies[8] have shown the potential for franchising to be huge. Nevertheless, many African countries have overlooked it.

V. CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Conclusion

Mobilising finance for green growth and climate action in Rwanda to meet its estimated needs will require that the private sector plays a major role. Actions should be taken to leverage the opportunities for private sector investments in adaptation and mitigation of climate change, while reducing the barriers to private sector investments. This will involve tapping into the emerging innovative private sector financing mechanisms for green growth and climate action.

Natural capital also plays a major role in climate finance. Renewable natural capital plays a major role in the economies of East Africa, Rwanda included. Rwanda needs to deepen its conservation efforts, especially of the forests and water bodies to ensure continued income generation from tourism (including ecotourism), intensification of agriculture with greater value added, possibly aquaculture, and energy generation, especially from methane gas.

The role of non-renewable assets, especially in mining and fossil fuels, is much smaller in Rwanda than in other parts of Africa. However, where such resources are present, care in managing them to the benefit of the country at large along the lines mentioned will be important.

For cropland and pastureland, more goods and services can be generated in value terms by investing in new technologies and extending the value chains. This may require bringing in foreign partnerships in selected cases such as leather and tanning, through expansion of the modern tannery park in the Bugesera Special Economic Zone. The role of the government in the development of this tannery park may be limited to availing land of 15 hectares, putting infrastructure such as roads, power, water and others and investment in a centralized effluent treatment system.[9] For forests, there are several incentives that can be introduced to reduce loss or damage to the forests and to increase the efficiency with which carbon can be captured. These should be pursued vigorously

Below is a set of policy recommendations for different sets of stakeholders with indications of whether these should be implemented in the short [S], medium [M] or long [L] term.

5.2 Policy recommendations for private sector financing for climate change and green growth

5.2.1 National Government

[S] Led by FONERWA, to ensure effective lateral and vertical coordination by national-level and sub-national-level institutions responsible for facilitating the implementation of green growth and climate action frameworks.

[S] Rapidly implement the sustainable financing frameworks that were developed during the implementation of the NST1, and the fiscal incentives' policy developed in 2020.

[M, L] Mainstream green skills development into education institutions to ensure that there is a continuous supply of green skills to enable the transition to green growth.

[M] Develop multistakeholder platforms that

link the domestic private sector with other international actors such as MDBs, DFIs and the international private sector actors that are sources of private sector finance.

5.2.2 MDBs and DFIs

[S] Become less risk-averse by further engaging with the Rwandan government to identify ways to provide affordable capital for green growth and climate change investments.

[M, L] Use innovative financing instruments that de-risk private sector investments, particularly in non-energy sectors such as water and health infrastructure development. Rwanda is the first country in the region to receive $319 million from the IMF Resilience and Sustainability Facility (RSF), which will strengthen climate-related spending, monitoring, fiscal planning, public investment management, climate-related risk management for financial institutions, and disaster risk reduction and management.

Mobilizing finance for green growth and climate action will require that the private sector plays a major role alongside effective coordination between national-level and sub-national-level institutions responsible for facilitating the implementation of green growth and climate action frameworks.

5.2.3 Domestic and international private sector

[M, L] Collaborate with the national government, MDBs and DFIs and other private sector actors to identify key risks to investments and propose ways of addressing these investment risks. This will call for the engagement of private sector federations such as the PSF.

5.2.4 Developed country governments.

[S] As shareholders of MDBs and DFIs, developed country governments should instruct these institutions to be less risk-averse when financing green growth in Rwanda and provide additional capital to these institutions.

5.3 Policy Recommendations for increasing the contribution of natural capital to climate finance and green growth

a. The Rwanda government should increase investment and efficiency to increase rents on cropland and pastureland, taking account of climate change impacts. This is something that needs to be undertaken in the short term and continued in the coming decades.

b. The Rwanda government should promote and enforce stricter policies and regulations protecting forests and preventing illegal logging.

c. The Rwanda government should strongly engage in carbon sequestration associated with nature-based solutions related to forestry and land use, agriculture and soil sequestration, and blue carbon. The country will need support from development partners to achieve this goal.

d. The Rwanda government should continue to encourage sustainable exploitation of the landscape for tourism, by developing ecotourism as a short to medium-term endeavour.

e. In the area of renewable energy, the Rwanda government, working with development partners and capital markets, need to exploit the potential for such energy much faster. This is already demonstrated using e-mobility strategies and frameworks, but more needs to be done.

f. The Rwanda government, development partners and developed countries should look at means for making natural capital more productive through strategic partnerships with state-owned enterprises and foreign investors. This should be led by the RDB, FONERWA and environment and climate-change sector working groups.

g. Development partners and national governments should work together to exploit international agreements in several areas. These include the creation of a single market for the trade of emissions credits (under Article 6 of the Paris International Agreement), which will raise the price of carbon credits in the forests; and increased participation in the voluntary market, where new opportunities are arising through the Post-2020 Global Biodiversity Framework. This could start straight away but may take a few years to mature.

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ANNEX 1: RWANDA SELECTED INDICATORS

Indicators	Unit	2010	2015	2018	2019	2020	2021	2022 (e)	2023 (p)	2024 (p)
National Accounts										
GNI at Current Prices	Million US $	6,082	8,499	9,649	10,396	9,991	11,308	...	...	...
GNI per Capita	US$	590	730	770	810	760	840	...	...	...
GDP at Current Prices	Million US $	5,849	8,542	9,619	10,325	10,097	11,067	14,171	15,596	17,169
GDP at 2010 Constant prices	Million US $	5,849	8,308	9,946	10,881	10,516	11,662	12,621	13,583	14,664
Real GDP Growth Rate	%	7.3	8.9	8.6	9.4	-3.4	10.9	8.2	7.6	8.0
Real per Capita GDP Growth Rate	%	4.6	6.3	6.0	6.8	-5.6	8.3	5.8	5.2	5.6
Value Added: Mining and quarrying	Million US $	62	146	215	150	128	310	237	...	...
Value Added: Mining and quarrying	% GDP	1.0	1.7	2.2	1.4	1.3	2.8	1.9	...	...
Value Added: Fishing	Million US $	21	35	38	38	34	41	46	...	...
Value Added: Fishing	% GDP	0.3	0.4	0.4	0.4	0.3	0.4	0.4	...	...
Prices and Money										
Inflation (CPI)	%	2.0	2.5	-0.3	3.4	9.9	0.8	17.7	7.4	5.6
Exchange Rate (Annual Average)	local currency/US$	583.1	719.6	861.1	899.5	943.3	988.9	1,030.6	1,077.7	1,106.7
Government Finance										
Total Revenue and Grants	% GDP	24.6	23.6	22.9	23.9	24.2	26.0	25.8	24.3	23.7
Total Expenditure and Net Lending	% GDP	24.7	27.8	29.8	31.3	33.1	34.5	34.6	32.2	30.6
Overall Deficit (-) / Surplus (+)	% GDP	-0.1	-4.2	-6.9	-7.3	-9.0	-8.5	-8.8	-8.0	-6.8
External Sector										
Terms of Trade Growth	%	-21.7	11.1	-1.3	6.1	21.9	-18.0	17.3	-6.0	-3.2
Current Account Balance	Million US $	-427	-1,084	-975	-1,231	-1,228	-1,187	-1,787	-1,755	-1,847
Current Account Balance	% GDP	-7.3	-12.7	-10.1	-11.9	-12.2	-10.7	-12.6	-11.3	-10.8
Debt and Financial Flows										
Debt Service	% exports	2.1	6.3	7.8	7.7	12.4	35.5	7.1	9.1	8.6
External Debt	% GDP	16.6	27.9	58.6	61.9	76.1	74.5	70.9	75.6	81.0
Net Total Financial Flows	Million US $	1,051	1,133	1,218	1,308	1,655	1,315	...	...	...
Net Official Development Assistance	Million US $	1,033	1,089	1,120	1,168	1,625	1,315	...	...	...
Net Foreign Direct Investment	Million US $	251	380	382	354	274	212	...	...	...
Demography										
Total Population	Millions	10.3	11.6	12.5	12.8	13.1	13.5	13.8	14.1	14.4
Population Growth Rate	%	2.6	2.4	2.5	2.4	2.4	2.4	2.3	2.3	2.3
Urban population	% of total	16.8	17.0	17.2	17.3	17.4	17.5	17.6	17.7	17.9
Life Expectancy at Birth	Years	62.5	65.3	66.3	66.4	66.8	66.1	67.1	67.4	67.6
Fertility Rate	births per woman	4.5	4.1	4.0	3.9	3.9	3.8	3.7	3.7	3.6
Poverty and Income Distribution										
Pop. living below national poverty line	% of total population	...	...	...	...	...	...	...	...	...
Population living below $2.15 a day	% of total population	59.2	...	...	...	...	...	...	...	...
Gini Index	%	47.2	...	...	...	...	...	...	...	...
Labor Indicators										
Labor Force participation (total)	%	61.0	60.6	53.7	52.8	57.0	55.8	54.9	54.1	...
Labour Force participation (youth)	%	45.7	44.1	38.9	38.8	44.2	41.7	40.8	40.1	...
Unemployment rate (total)	%	11.9	11.8	12.1	12.4	13.0	13.3	13.0	12.7	12.4
Unemployment rate (youth)	%	16.6	16.6	17.7	17.2	17.2	17.7	17.4	17.1	16.7
Natural Resources rents										
Total natural resources rents	% GDP	6.5	5.8	4.5	3.8	3.9	...	...	...	...
Oil rents	% GDP	...	...	...	...	...	...	...	...	...
Natural gas rents	% GDP	...	...	...	...	...	...	...	...	...
Mineral rents	% GDP	0.6	0.1	0.2	...	...	...	...	...	...
Forest rents	% GDP	5.9	5.7	4.3	3.8	3.9	...	...	...	...
Coal rents	% GDP	...	...	...	...	...	...	...	...	...
Natural Capital Renewable Resources										
Arable land	1000 hectare	1,123.9	1,151.7	1,151.7	1,151.7	1,151.7	...	...	...	...
Agricultural land	1000 hectare	1,803.9	1,811.7	1,811.7	1,811.7	1,811.7	...	...	...	...
Other land	1000 hectare	398.1	385.3	381.3	380.3	379.3	...	...	...	...
Forest land	1000 hectare	265.0	270.0	274.0	275.0	276.0	...	...	...	...
Planted Forest	1000 hectare	138.0	144.0	148.0	149.0	150.0	...	...	...	...
Annual freshwater withdrawals, total	% of internal resources	4.0	5.3	6.1	6.4	...	...	...	...	...
Total Fisheries Production	metric tons	13,100.3	30,954.2	27,534.0	24,760.2	37,037.6	...	...	...	...
Climate Finance and Green Growth										
Total Climate Finance*	Million US $	...	...	...	...	673.6	...	...	...	...
Green Growth Index**	%	49.4	51.0	50.8	50.3	50.6	50.5	...	...	...

Source : AfDB Statistics Department: African; IMF: World Economic Outlook,April 2023 and International Financial Statistics, April 2023; AfDB Statistics Department: Development Data Portal Database, April 2023. United Nations: OECD, Reporting System Division.Notes: … Data Not Available (e) Estimations (p) ProjectionsLast Update: June 2023 Source: Climate Policy Initiative (www.climatepolicyinitiative.org)**Source: Global Green Growth Institute (GGGI). The scores for the Green Growth Index range from 1 to 100, with 1 having the lowest or very low performance and 100 having the highest or very high performance*

ENDNOTES

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