



Institute of Policy Analysis  
and Research - Rwanda

***Improving policy, impacting change***

## **GREENING RWANDA'S ECONOMY: TOWARDS NATURE POSITIVE ECONOMIES THAT WORK FOR PEOPLE AND NATURE**



**Economics  
FOR Nature**

A global partnership to put  
natural capital at the heart  
of our economies



**June 2022**

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***Any errors or omissions in this framing paper are the responsibility of the authors***

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<sup>1</sup> *Nature positive green economies understand the reliance of economic activity on natural systems, and integrate this thinking into policy and decision-making processes that restore and protect nature*

## ACRONYMS AND ABBREVIATIONS

1	IPAR	Institute of Policy Analysis Rwanda
2	MoE	The Ministry of Environment
3	GoR	The Government of Rwanda
4	GEC-EA	Green Economy Coalition-East Africa
5	ACODE	Advocates Coalition for Development and Environment
6	UNEP	United Nations Environment Program
7	GDSA	Gaborone Declaration on Sustainability in Africa
8	NCA	Natural Capital Accounting
9	WAVES	Wealth Accounting and Valuation of Ecosystem Services
10	GDP	Gross Domestic Product
11	NDC	Nationally Determined Contributions
12	NST1	Rwanda's National Strategy for Transformation
13	7YGP	Seven Years Government Program
14	EDPRS2	The Economic Development and Poverty Reduction Strategy
15	MINECOFIN	The Ministry of finance and economic planning
16	NWRMP	National Water Resources Master Plan
17	GGCCRS	The Green Growth and Climate Change Resilience Strategy
18	ENR	Environment and Natural Resources
19	GCF	Green Climate Fund
20	UNFCCC	United Nations Framework Convention on Climate Change
21	Nbs	Nature Based solutions
22	UNCCD	United Nations Conventions to Combat Desertification
23	LDN	Land Degradation Neutrality
24	LWH	Land husbandry Water Harvesting Hillside Irrigation
25	INDC	Intended National Determined Contributions
26	GEF	Global Environmental Facility
27	RoR	Republic of Rwanda
28	SOER	State of Environment Report
29	CBD	Convention on Biological Diversity
30	NBSAPs	National Biodiversity Strategies and Action Plans
31	GDP	gross domestic product
32	NAPA	National Adaptation programs of Action
33	FLR	Forest landscape Restoration
34	IWRM	Integrated water resource management
35	GGEI	Global Green Economy Index™
37	EDPRS	Economic Development and Poverty Reduction Strategy
38	REMA	The Rwanda Environment Management Authority

39	SPTAR	The Strategic Plan for the Transformation of Agriculture in Rwanda
40	NIE	National Implementing Entity
41	DNA	Designated National Authority
42	AdCom	Adaptation Communication
43	CCIOU	The Climate Change and International Obligations Unit
44	GCF	Green Climate Fund
45	GEF	Global Environment Facility
46	GGCCRS	The Green Growth Climate Change resilience strategy
47	INDC	Intended Nationally determined contribution
48	ENR	The Environment and Natural resources sector
49	NBI	Nile Basin Initiative
50	ABAKIR	Autorite du Bassin du Lake Kivu and de la riviere Rusizi).
51	TWG	Thematic Working Groups
52	SWGs	Sector Working Groups
53	TEV	Total Economic Value (TEV
54	NCA	Adopt Natural Capital Accounting
55	GDP	Gross Domestic Product

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## 1.0. Introduction

Rwanda has been the tenth fastest growing economy in the world over the past decade and has lifted 1 million people out of poverty and is actively engaged in creating the enabling conditions for building a green economy. However, the country is still facing considerable challenges, such as high and persistent extreme poverty, reliance on vulnerable agricultural systems, and insufficient coordination across sectors. The Government of Rwanda (GoR) recognizes the opportunities for green economy to generate sustained economic growth while ensuring social well-being and mitigating environmental risks and has incorporated green and inclusive growth goals into its Vision 2020. According to the Global Green Economy Index™ (GGEI), a platform that measures the green economy performance of 160 countries across 18 indicators as approved by the Dual Citizen LLC", Rwanda is ranked the 44<sup>th</sup> Country worldwide comparing the “time series available” from 2005-2020, the period for which GGEI data for a given country is published.<sup>2</sup> To give effect to its green economy ambitions, Rwanda has elaborated key policies and strategies such as Vision 2020, the Economic Development and Poverty Reduction Strategy (EDPRS), the Strategic Plan for the Transformation of Agriculture in Rwanda (SPTAR), and the Irrigation Master Plan (IMP). These recognize deforestation, natural resources depletion (renewable resources like forests and lands, and non-renewable resources like minerals), land degradation, soil erosion and soil degradation, loss of biodiversity, water pollution and access, dependency on biomass for fuel and climate variability as the greatest challenges and threats to the development agenda. To reverse these trends, the GoR has highlighted six NAPA priority adaptation options<sup>3</sup> (1) integrated water resource management (IWRM), (2) early warning and agro-meteorological

<sup>2</sup> <https://dualcitizeninc.com/global-green-economy-index/>

<sup>3</sup> National Adaptation Programmes of Action (NAPA) (2006)

information systems with rapid response mechanisms, (3) promotion of non-agricultural income-generating activities, (4) intensive agro-animal husbandry activities, (5) promotion of drought resistant varieties, and (6) development of energy sources alternative to firewood<sup>4</sup>. In accordance with these priority areas, several National Adaptation programs of Action (NAPA) projects have been implemented<sup>5</sup> and relate to:

- I. Promotion of techniques for land conservation and protection against erosion and floods in areas vulnerable to climate change.
- II. Creation of early warning systems and installation and rehabilitation of hydrological and meteorological stations to increase resilience to variabilities and changes in climate.
- III. Development of irrigation systems in areas exposed to prolonged droughts.
- IV. District-level support in planning and implementing measures, practices, and technologies related to land conservation, water harvesting, and promotion of climate-adapted crop varieties.
- V. Rehabilitating and restoration of land that has been occupied by mining activities so that it can be of other economic importance.
- VI. Promotion of practices and services aimed at increasing the adaptive capacity of the “Imidugudu” groups located in climate-vulnerable regions, such as potable water and sanitation facilities, as well as use of alternative energy, and the promotion of non-farming jobs.
- VII. Enhanced food and medicine distribution during climate extreme events.
- VIII. Preparation and implementation of a woody combustible substitution national strategy to combat deforestation and erosion.

Rwanda has taken a proactive approach in mainstreaming climate change into its development policies and strategies – many of which promote investing, protecting, and restoring ecosystems, which is why transitioning towards a nature positive green economy is evident.

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<sup>4</sup> RoR. 2006. National Adaptation Programmes of action to Climate Change (NAPA). Republic of Rwanda (Available at: <http://unfccc.int/resource/docs/napa/rwa01e.pdf>).

<sup>5</sup> The World Bank. 2014. Aide Memoire for Joint Implementation Support Mission Land Husbandry, Water Harvesting and Hillside Irrigation Project (LWH) and Third Rural Sector Support Program (RSSP3). Kigali: World Bank. (Available at: <http://www-wds.worldbank.org>)

## 2.0. Background

According to the United Nations Environment Programme, a Green Economy is an economy that results in improved human well-being and reduced inequalities over the long term, while not exposing future generations to significant environmental risks and ecological scarcities.<sup>6</sup> There is no single model of the 'green economy', but multiple forms of locally specific green-economy activities. The key principle of the 'green economy' is about seeking economic opportunities from socially and environmentally sustainable practices and vice versa. This simply means that the 'green economy' is one that promotes economic opportunities that are not in conflict with environmental sustainability and social well-being and promote environmental objectives that can provide new forms of socio-economic opportunities. Rwanda for Examples has set key interventions to going green in different areas of the economy<sup>7</sup>:

### The green economy

“An economy that results in improved human well-being and reduced inequalities over the long term, while not exposing future generations to significant environmental risks and ecological scarcities” or A green economy is defined as low carbon, resource efficient and socially inclusive (UNEP,2012).

#### a) **Transport and Urban efficiency**

- Integrated spatial planning to improve urban efficiency.
- Promote and enable green building design and green building materials and standards.
- Promote and enable low carbon transportation.

#### b) **Energy**

- Promote and enable energy efficiency and demand side management.
- Increase the proportion of renewable energy in the national energy supply mix.
- Enhance the universal access to clean, renewable energy services

#### c) **Waste**

- Measures to improve supply chain efficiency and prevent the production of waste.
- Reduce the waste going to landfill by increasing reuse and recycling.
- Invest in clean technology and value adding to waste.

#### d) **Water.**

- Enhance the provision of water and sanitation services.
- Increase water-use efficiency and equitable distribution through appropriate Incentives.
- Improve monitoring and reporting to ensure best practice and standards in water and wastewater management.

#### e) **Agriculture.**

- Develop sustainable agricultural systems where the dependency of agriculture on natural resources is recognized.

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<sup>6</sup> United Nations Environment Programme (UNEP),2012,

<sup>7</sup>



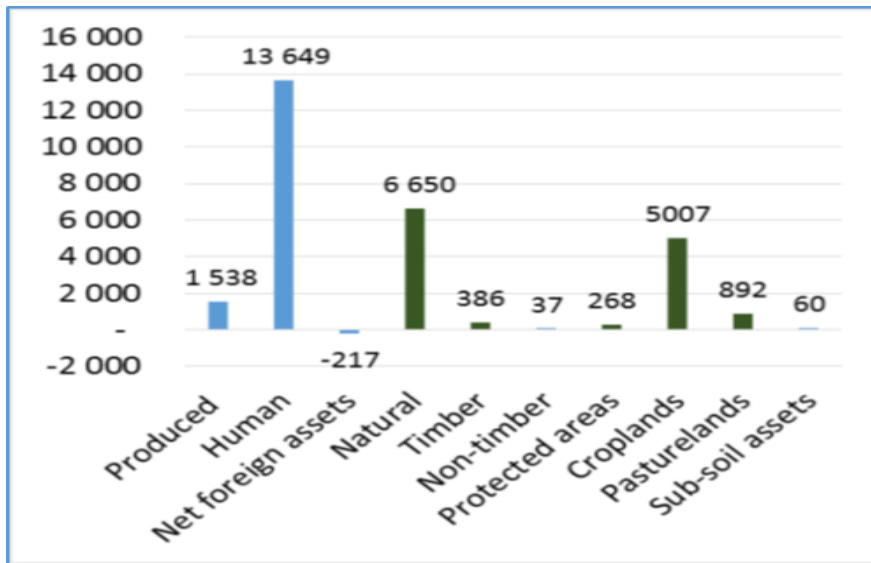
- Focus agricultural production to improve food security and livelihoods and create resilient ecosystems; There are numerous profits resultant from the Green Economy aspect, and these include the environmental, social, and economic benefits.

**Table I. Key benefits of a green economy for a country**

<b>Environmental benefits</b>	<b>Economic and social benefits</b>
<ul style="list-style-type: none"> <li>○ Natural resources protected, conserved, and enhanced;</li> </ul>	<ul style="list-style-type: none"> <li>○ Jobs and skills;</li> </ul>
<ul style="list-style-type: none"> <li>○ Biodiversity and ecosystem services sustained;</li> </ul>	<ul style="list-style-type: none"> <li>○ Production potential;</li> </ul>
<ul style="list-style-type: none"> <li>○ GHG emissions reduced, carbon stored;</li> </ul>	<ul style="list-style-type: none"> <li>○ Efficient sustainable businesses;</li> </ul>
<ul style="list-style-type: none"> <li>○ Climate resilience;</li> </ul>	<ul style="list-style-type: none"> <li>○ New markets and products;</li> </ul>
	<ul style="list-style-type: none"> <li>○ Economically viable and prosperous rural communities;</li> </ul>
	<ul style="list-style-type: none"> <li>○ Social inclusivity</li> </ul>

The Economics for Nature conceptualization of natural capital is that *natural capital refers to nature and biodiversity, focusing on renewable resources and ecosystems, such as forests, water bodies and watersheds*, shrublands, farmlands and plantations offer a wide range of services to Rwanda and its citizens. For example, rivers supply water for abstraction but also water for diluting pollution, and while farmlands supply food, sustainably managed farms can also assist with soil erosion prevention and ground water recharge. Consequently, natural capital can be considered ecological assets, which supply large volumes of ecosystem services to both rural and urban households. Measuring the size, condition, and trends over time in natural capital is important in understanding current and future supplies of services such as water yields, erosion control, flood reduction and food yields. Recognizing natural capital as an additional form of capital is critical to measure and analyses the full ‘wealth’ of a nation. Much of Rwanda relies directly or indirectly on natural capital to supply water security, food security, energy security and the reduction of disaster impacts. Based on global wealth accounts, the Figure below outlines the total wealth per capita in Rwanda (US\$21,619), and highlights the values of produced, human and natural capital, with natural capital (US\$ 6,650) broken up into its components (timber, non-timber, protected areas, croplands, pasturelands, and subsoil assets)<sup>8</sup>.

<sup>8</sup> Lange, G-M., Wodon, Q., and Carey, K. (eds.) 2018. The Changing Wealth of Nations 2018: Building a Sustainable Future. Washington, DC: World Bank. doi:10.1596/978-1-4648-1046-6;



The discounted future returns from natural capital are four times greater than the return on produced assets, highlighting the importance of natural capital in the wealth of Rwanda.

The economy derives a wide range of services from natural capital, sometimes called ecosystem services. The wealth of a nation or a business is more than just what its people can produce. *The value of “natural capital”*, i.e. the services that nature provides, includes fresh water, flood control and forest products and while critically important for societal welfare and economic prosperity, is often overlooked. Natural capital supports human and financial capital and when climate change, overpopulation or pollution threatens nature, societies and economies are threatened, too. Natural capital has long been considered “**free**,” which causes the benefits that nature provides to be taken for granted and used at a rate that the Earth cannot replenish<sup>9</sup>.

Consequently, natural capital must be managed, in combination with built or physical capital, human capital and social capital to ensure that national water, food and energy security, and risk reduction processes are resilient and sustainable. ‘To measure is to know’, therefore measuring natural capital is vital for effective decision making in national planning, and hence ecosystem accounts offer the Government of Rwanda a means to measure the changing state of natural capital and the nation’s wealth<sup>10</sup>.

<sup>9</sup> Seddon, N., Sengupta, S., García-Espinosa, M., Hauler, I., Herr, D. and Rizvi, A.R. (2019). Nature-based Solutions in Nationally Determined Contributions: Synthesis and recommendations for enhancing climate ambition and action by 2020. Gland, Switzerland and Oxford, UK: IUCN and University of Oxford

<sup>10</sup>Lange, G-M., Wodon, Q., and Carey, K. (eds.) 2018. The Changing Wealth of Nations 2018: Building a Sustainable Future. Washington, DC: World Bank. doi:10.1596/978-1-4648-1046-6.

## 3.0. The policy, legal and institutional framework for transitioning to a Green Economy

### 3.1. National Circumstances

Rwanda has been formally engaging in international climate change policy by ratifying the United Nations Framework Convention on Climate Change (UNFCCC) in 1995 (Presidential Order No. 021/01 of 30 May 1995) and the Kyoto protocol in 2003 (Law No. 36/2003 of 29 December 2003). The country also submitted the First, Second and third National Communications<sup>11</sup> under the UNFCCC in 2005, 2012 and 2018 respectively. In addition to these efforts, Rwanda submitted its first National Adaptation Programme of Action (NAPA) in 2006. In October 2021, Rwanda also submitted its first Adaptation Communication (AdCom) in response to the Paris Agreement (Article 7, paragraph 10) of the UNFCCC, in 2009, the Climate Change and International Obligations Unit (CCIOU) was established within the Rwanda Environmental Management Authority (REMA)<sup>12</sup>, with the mandate to oversee its Designated National Authority (DNA) and coordinate carbon market activities. Subsequently, in 2010, the Government established its National Implementing Entity (NIE) under the Ministry of Natural Resources (MINIRENA) now the Ministry of Environment (MoE), to facilitate access to financial resources from the UNFCCC Adaptation Fund (AF).

### 3.2. Institutional Framework

The Ministry of Environment (MoE) of the Republic of Rwanda is responsible for the development and dissemination of the environment and climate change policies, strategies and programs and the legal instruments that give them effect. The ministry is accredited by the Green Climate Fund (GCF) and the Adaptation Fund. The Rwanda Environment Management Authority (REMA) is the national regulatory agency responsible for coordinating the implementation of these policies and the strategies and programmes that derive from them. REMA was established by a 2005 statute revised in 2013 and is the National Designated Authority (NDA) for the GCF and the operational focal point of the Global Environment Facility (GEF). These institutions have spearheaded the

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<sup>11</sup>Republic of Rwanda (2018). Third National Communication: Report to the United Nations Framework Convention on Climate Change. Republic of Rwanda, Kigali.

<sup>12</sup>RoR. 2000. Rwanda Vision 2020. Kigali: Republic of Rwanda, Ministry of Finance and Economic Planning. (Available at: <https://repositories.lib.utexas.edu/bitstream/handle/2152/5071/4164.pdf?sequence=1>)

implementation of key climate changes strategies including the green growth climate change resilience strategy (GGCCRS) (Under review), the nationally determined contribution (NDC) or intended nationally determined contribution (INDC) that is a non-binding national plan highlighting climate change mitigation, including climate-related targets for greenhouse gas emission reductions.

### 3.3. Legal Framework

Rwanda updated relevant policies and legislation following ratification of the Paris Agreement to ensure compliance. The laws are implemented under a clear set strategy called the Environment and Natural Resources Strategic Plan (2018-2024) that advance and support the green economy transition in clear manner.

On the policy and strategic level context, The Environment and Natural resources (ENR) sector policies and strategies are aligned with an extensive range of national, regional, and international policy frameworks. Rwanda's Vision 2020 and the emerging Vision 2050 provide the overarching vision of the country's economic growth and ambition to achieve middle, upper middle and ultimately high-income status by 2050. The global Sustainable Development Goals provide a holistic framework for ensuring Rwanda's growth is sustainable as it implements under this vision. Equally, Rwanda's Nationally Determined contributions to the Paris Agreement on Climate Change commit Rwanda to a development pathway that is low-emission and climate resilient. The objective of the ENR Sector Strategic Plan is to contribute to Rwanda's vision of sustainable economic development by safeguarding the natural capital that underpins it. The above national and international development frameworks provide important high-level guidance that is complimented from on-ground information and emerging needs across the six ENR sub-sectors and across related sectors, particularly agriculture and infrastructure, that in turn inform Rwanda's medium-term strategic planning in the form of NST-I (2018-2024). With this background, the latest policy and strategic framework developments from the six ENR sub-sectors are summarized below.

- Forestry, Rwanda's Forestry Policy, and sub-sector strategy plan were both revised in May 2017. The aim of the policy and plan are to ensure sustainable forest management and the maintenance of a 30% forest coverage by establishing strong foundations for reliable domestic management and outsourced technologies in the forestry subsector.

- Integrated water resources management (IWRM). The guiding framework for water resources management in Rwanda is the National Policy for water resource management adopted in 2011. The overarching goal of this policy is to manage and develop the water resources of Rwanda in an integrated and sustainable manner to secure and provide water of adequate quantity and quality for all social and economic needs of the present and future generations with the full participation of all stakeholders in decisions affecting water resources management. The policy further highlights the importance of a catchment-based approach to management. Moreover, the major trans-boundary basins under which Rwanda belongs to are the Congo and Nile basins. To advance cooperation on the shared water resources within the two basins, Rwanda has contributed to the establishment and continues to support the operationalization of the Nile Basin Initiative (NBI) and ABAKIR (Autorite du Basin du Lake Kivu and de la riviere Rusizi).
- Land. According to the Organic Land Law, land can be defined as a surface area with biodiversity, non-biodiversity like rocks, buildings, various infrastructures, rivers, lakes as well as the sub soil and its atmosphere. The land sub-sector is very wide in scope as it covers all natural resources and forms the basis of most other sectors including Agriculture, Infrastructure, Geology, Environment, and others. According to the land law 2013, Land in Rwanda is categorized into two: Individual land and public land. Land in Rwanda is predominantly individual land. The overall objective of the National land policy is to establish a land system that is secure for all Rwandans, land reforms that are necessary for good management and proper use of National land resources for a harmonious and sustainable development that ensures protection of the Environment.
- Meteorology. The work of Meteo Rwanda is guided by its recently formulated 2018-2024 strategic plan to better deliver on its mandate to provide accurate and timely weather and climate information. The sub-sector also elaborated a Climate Data Policy in 2016 to define guidelines for both producers and users. Environmental management. Under supervision of the Ministry of Environment, from the Law n°63/2013 of 27/08/2013 determining the mission, organization and functioning of Rwanda Environment Management Authority (REMA), REMA reserves the legal mandate for national environmental protection, conservation, promotion, and overall management, including advisory to the government on all matters pertinent to the environment and climate change.

- Mining, petroleum, and gas. This sub-sector has been undergoing a transition in Rwanda, recently culminating in the establishment of the Rwanda Mines, Petroleum and Gas Board (RMB) by Law N 07/2017 to re-design the minerals sector to deliver higher-level results. The sub-sector aims to contribute up to 4% of Rwanda’s GDP by 2050, and 3.6% by 2024, including through value addition activities and gas sector developments from Liquefied Petroleum Gas (LPG) in Lake Kivu. Towards this target, the mining sub-sector aims to earn USD 800 million by 2020 and USD 1.5 billion annually by 2024. The ENR sector has key strategic orientation is reflected in sectors contributions towards implementation of the first phase of the National Strategy for Transformation (NST-I), outstanding targets of Vision 2020 and emerging priorities for Vision 2050. The plan also aligns with strategic frameworks including the Sustainable Development Goals (SDGs) and Rwanda’s Nationally Determined Contributions (NDC) to the Paris Agreement on Climate Change corresponding to Rwanda’s Green Growth and Climate Resilience Strategy (GGCRS). Methodology. The ENR SSP builds on a consultative revision and stocktaking process carried out in 2016 and reflects updated strategic planning and policy process across six core sub-sectors of Forests, Meteorology, Environment and Climate Change, Land, Mining, Petroleum & Gas and Integrated Water Resources Management (IWRM). The subsectors were further developed through iterative consultations including Thematic Working Groups (TWGs), and Sector Working Groups (SWGs) with a clear structure of a having a wide overview covering each of the six sub-sectors while implementation plans covering short, medium, and long-term periods, monitoring, evaluation plans, and estimated costs and financing sources with a clear focus on key ENR innovations for NST-I: Sector-level as below.

  - a. Adopt Natural Capital Accounting (NCA) practices to track the Total Economic Value (TEV) of natural capital to the Rwandan economy focusing on land, water, forests, wetlands, and mining, thereby accounting for gains and losses relative to GDP growth.
  - b. Systematically track the total value of green (and efficiency) investments and corresponding returns on investment across ENR sub-sectors and key productive sectors (agriculture, energy, infrastructure, etc.), with a focus on partnerships with priority secondary cities and private industry. This aims to highlight the triple-bottom-line benefits (economic, social, environmental) of green growth as Rwanda urbanizes and industrializes. For example,

between 2009 and 2016, support from the Resource efficient and Cleaner Production Centre to Rwandan industry generated cost savings of approximate USD 7.4 million<sup>13</sup>.

- c. Scale up green investment through consideration of green bonds and other innovative financial instruments in partnership with FONERWA<sup>14</sup>, complimented by strategic policy and regulatory reforms and incentives to finance investment in sustaining and increasing the productivity of Rwanda’s natural capital, as well as its climate resilience.
- d. Set an operational Doppler weather Radar combined with automatic Stations network transmitting real time weather data which will help in weather watch and early warning of weather and climate extremes in lead time.
- e. The climate web portal “map room” as a collection of maps and other figures that monitor climate, malaria historical analysis and Agriculture conditions at present and in the recent past. For inclusion purposes, the ENR sector intersects with a wide-range sectors and sub-sectors, linking areas such as agriculture, energy, tourism, housing, health, macroeconomic management, gender and social development, among others with its focus priority being to ensuring improved coordination among partners in terms of programming, activity implementation and funding and this is done through strengthening Sector Working Group (SWG) and Thematic Working Groups (TWGs) approaches, including through results based management oversight and accountability frameworks. As such, SWGs and TWGs bring together all key stakeholders (**see key stakeholders**) from the Central and Local government institutions, development partners, the private sector and civil society engaged in the ENR sector.

### 3.4 Key policies, strategies, and Plans

**Table 2. Rwanda’s policies enacted for the environment (REMA, 2018)**

Policies	Year
National Environment Policy 2003, Revised to the new National Environment and Climate Change Policy, provides strategic direction and responses to the emerging issues and critical challenges in environmental management and climate change adaptation and mitigation	2019

<sup>13</sup> REMA, 2017. Impacts of REMA’s programmes/EDPRS II period & priorities for NST-1. Environment and climate change thematic working group meeting 24 August 2017.

<sup>14</sup> Rwanda’s environment and climate change fund, FONERWA, was made an autonomous institution supporting green finance across key sectors

National Policy & Strategy for Water Supply and Sanitation Services;	2010
Rwanda Biodiversity Policy	2011
Rwanda Wildlife Policy	2013
National Forest Policy 2013, as Revised to a new National Forest Policy, in 2018	2018
National Land Policy 2004 revised in 2019 to a new National Land Policy, 2019	2019
Rwanda National Forestry Policy	2018
National Urbanization Policy	2015
National Policy for Water Resources Management	2011
National Policy for Water Supply and Sanitation (2010), aimed at promoting sustainable distribution of water across different users in different locations in Rwanda;	2010
National Biodiversity Policy	2011

**Table 3. Rwanda's Laws enacted for the environment (REMA, 2018)**

Law No.	Year
58/2008 10/09/2008 Law determining the organization and management of aquaculture and fishing in Rwanda	2008
62/2008 10/09/2008 Law putting in place the use, conservation, protection, and management of water resources regulations	2008
31/2009 26/10/2009 Law enforces protection of Intellectual Property Rights	2009
20/2011 21/06/2011 Law governing human habitation	2011
10/2012 02/05/2012 Law governing urban planning and building in Rwanda	2012
16/2012 22/05/2012 Law determining the organization, functioning and mission of the National Fund for Environment (FONERWA)	2012
46/2013 16/06/2013 Law established the Rwanda Development Board (RDB) with the mandate to FastTrack development activities and facilitate the Government and private sector to undertake an active role	2013
47/2013 28/06/2013 Law determining the Management and Utilisation of Forests in Rwanda 2013	
55/2013 02/08/2013 Law on Mineral Tax 2013	
57/2013 10/08/2013 Law authorising the accession of Rwanda to the International Union for Conservation of Nature and Natural Resources (IUCN)	2013
58/2013 10/08/2013 Law authorising the ratification of the Treaty of 05 February 2005 on the conservation and sustainable management of forest ecosystems in Central Africa and establishing the Central African Forests Commission (COMIFAC)	2013
59/2013 10/08/2013 Law authorising the accession of Rwanda to the Regional Centre for Mapping of Resources for Development (RCMRD)	2013
63/2013 27/08/2013 Law determining the mission, organization and functioning of Rwanda Environment Management Authority (REMA)	



70/2013	02/09/2013	Law Governing biodiversity in Rwanda	2013
13/2014	20/05/2014	Law on Mining and Quarry Operations 2014	2014
41/2015	29/08/2015	Law relating to disaster management 2015	2015
45/2015	15/10/2015	Law establishing the Gishwati -Mukura National Park 2015	2015
18/2016	18/05/2016	Law Governing the preservation of air quality and prevention of air pollution in Rwanda	2016
14/2017	14/04/2017	Law established the Rwanda Agriculture and Animal Resources Development Board (RAB) with the mission of developing agriculture and animal resources through research, agricultural and animal resources extension to increase agricultural and animal productivity	2017
39/2017	16/08/2017	Law establishing the National Fund for Environment and determining its mission, organisation, and functioning	2017
48/2018	13/08/2018	Law on Environment 2018	2018
17/2019	10/08/2019	Law relating to the prohibition of manufacturing, importation, use and sale of plastic carry bags and single-use plastic items	2019
71/2019	29/01/2020	Law establishing Rwanda Water Resources Board (WRB) with the mandate to ensure availability of enough and well managed water resources for sustainable development	2020
72/2019	29/01/2020	Law establishing Rwanda Forestry Authority (RFA) with the mandate to ensure growth of forest resources, their management and protection for sustainable development purposes	2020
27/2021	10/06/2021	Law governing land	2021

**Table 4 Rwanda's selected Ministerial Orders and Instructions (REMA, 2018); (Bizimana, 2018); (RoR, 2020).**

INSTRUCTION NO.	DATE MINISTERIAL	ORDER/INSTRUCTION	YEAR
57/2004 2004	18/02/2004	Ministerial Instruction on the use and manufacturing of plastic bags in Rwanda	2004
002/2008	01/04/2008	Ministerial Order determining modalities of land registration	2008
004/2008	15/08/2008	Ministerial Order establishing the list of works, activities and projects that must undertake an environment impact assessment.	2008
005/2008	15/08/2008	Ministerial Order establishing modalities of inspecting companies or activities that pollute the environment	2008

006/2008	15/08/2008	Ministerial Order regulating the importation and exportation of ozone layer depleting substances products and equipment containing such substances	2008
007/2008	15/08/2008	Ministerial Order establishing the list of protected animal and plant species 2008	
26-MAR	23/10/2008	Prime Minister's Order determining the list of chemicals and other prohibited pollutants	2008
27/03 23/10/2008		Prime Minister's Order determining a list of prohibited drugs unless authorized or temporary permitted	
MINICOM/2010	14/09/2010	Ministerial Order determining the modalities of environment conservation in mining and quarry extraction	2010
005/MINIFOM	14/09/2010	Ministerial Order determining the procedures of requesting licences, the conditions, classification of mineral substances and the procedures for licence limits on mining and quarry extraction	2010
003/	14/09/2010	14/09/2010 Ministerial Order on requirements for granting the licence for purchasing and selling mineral substances in Rwanda	2010
006/MINIFOM	14/09/2010	Ministerial order determining taxes applicable to mines and quarries 2010	2010
003/16.01	15/07/2010	Ministerial Order preventing activities that pollute the atmosphere	2010
004/16.01	15/07/2010	Ministerial Order governing the importation and exportation of wild animals 2010	
005/16.01	15/07/2010	Ministerial Order determining the list of prohibited plains to constructions	- 2010
006/16.01	15/07/2010	Ministerial Order establishing special regulations relating to burying toxic wastes 2010	2010
007/16.01	15/07/2010	Ministerial Order determining the length of land on shores of lakes and rivers transferred to public property	

126/03	25/10/2010	Prime Ministerial Order determining the responsibilities, organization and functioning of committees in charge of the environment conservation and protection	2010
008/16.01	26/11/2010	Ministerial Order establishing rules and procedures for Rwanda environment management authorities	2010
002/16.01	24/05/2013	Ministerial Order Determining the Procedure for Declaration, Authorisation and Concession for the Utilisation of Water	2013
004/16.01	24/05/2013	Ministerial Order determining the list of water pollutants	2013
005/16.01	24/05/2013	Ministerial Order determining the organisation and functioning of hydrographic basin committees	2013
006/16.01	24/05/2013	Ministerial Order determining the organization of water resources data collection, treatment, management, exploitation, and communication	2013
007/16.01	24/05/2013	Ministerial Order determining the main management visions of water resources in the main hydrographic basins in Rwanda	2013
37/ 16.09	30/07/2013	Ministerial Instructions relating to the Management and exploitation of used paper	2013
005/03	27/12/2013	Prime Minister's Instructions preventing Air Pollution caused by vehicular emissions and machines using petroleum products in Rwanda	2014

MINIRENA/2015	18/06/2015	Ministerial Order determining the management of protected state forests not managed by Special laws	2015
006/03	30/01/2017	Prime Minister's Order drawing up a list of swamp lands, their characteristics and determining modalities of their use, development, and management.	2017
001/ 2019	15/04/2019	Ministerial Order establishing the list of projects that must undergo environmental impact assessment, instructions, requirements, and procedures to conduct environmental impact assessment	2019

**Table 5. Rwanda's Strategic Plans (REMA, 2018)**

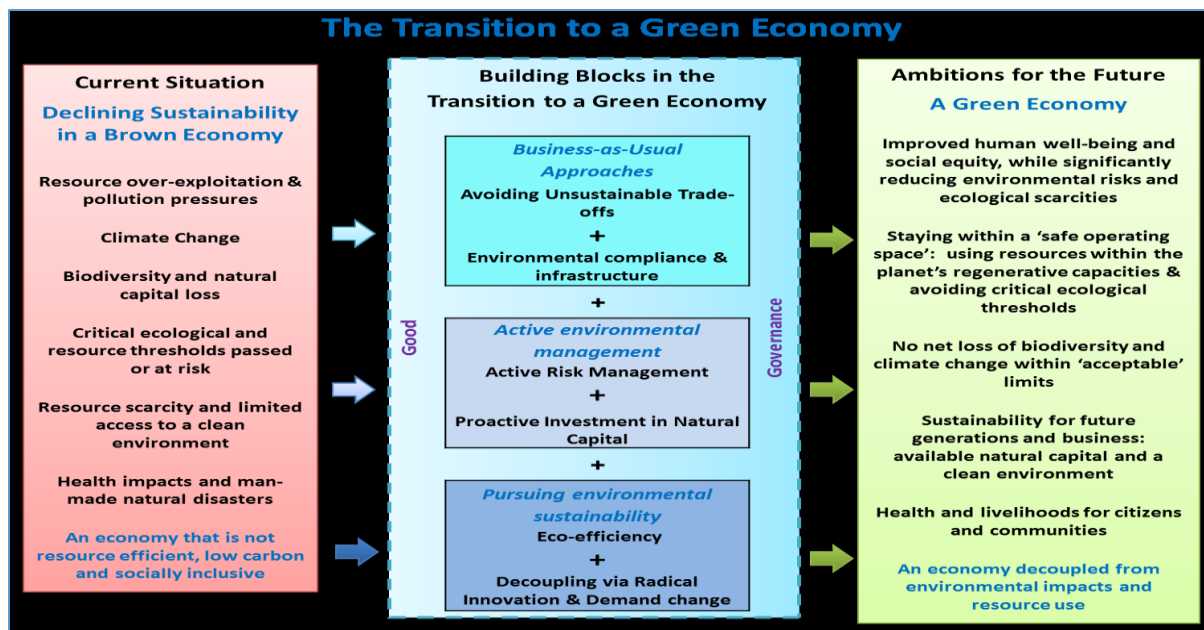
National Strategy and Action Plan for the Conservation of Biodiversity in Rwanda	2003
Five-Year Strategic Plan for the Environment and Natural Resource Sector 2009-2013	2009
Environment Sub-Sector Strategic Plan 2010-2015 2010	2010
Rwanda Environmental Education for Sustainable Development Strategy: A Strategy and Action Plan for 2010-2015	2010
The Green Growth and Climate Resilience Strategy (GGCRS) with a vision for Rwanda to be a developed, climate-resilient, and low-carbon economy by 2050	2011
Environment and Climate Change Sub-sector strategic Plan 2013/14- 2017/2018 2012	2012
National Biodiversity Strategy and Action Plan (NBSAP II) (2016-2020)	2016
National Cooling Strategy	2020
National Land Use and Development Master Plan	2020

#### **4.0. The Status of Transition to a Green Economy**

Transitioning to the green economy requires political will, technological developments, and encouragement from market pressures. The transition will take place progressively through a series of steps. Key drivers of the green economy include policies undertaken at national, regional, and global levels, and the emergence of new or more affordable technological innovations including building strategic partnership (Rwanda is a member of the Green Economy Coalition (GEC-EA) a coalition that exists to accelerate the inclusive and sustainable transition of member states to achieving the green status level through advocacy and raise the voices to give citizens a voice, hold our governments accountable and drive real economic change through the proper management and use of the nature, involvement of the civil society organizations etc. However,

the market also has a powerful role to play in this whole process. The preferences and decisions of consumers, retailers, tourists, processors etc. can have a major impact. These political, technological and market forces exist in a state of ongoing dynamism. There is tremendous progress being made by Rwanda towards sustainable management of its environment and natural resources since 2004, when the first Environment Policy was prepared. The new Environment Policy framework that is being developed under vision 2050; the country's proactive engagement of seeking advice from the Experts in Environment and Climate Change, civil society organizations to advising the GoR on climate change adaptation and mitigation, its affiliation to the international organizations that focus on Green Growth such as GGGI, UNEP and other similar organizations, show clearly that Rwanda is in the right direction towards its transition to Green Growth. More cooperation and partnership will be needed to mobilize financial resources and develop the required multi-sectoral and inter-disciplinary capacity to accelerate the speed of the journey towards the Climate Resilient Rwanda. Research into the process of transition to a green economy has identified six building blocks for a transition from a 'brown' to a 'green' economy. These building blocks form a sequence of steps from traditional or business-as-usual approaches through active environmental management to finally a growing recognition of the need to achieve true environmental sustainability through resource efficiency and the use of more innovative technologies and techniques, as well as looking at ways of altering demand.

**Figure 1: Key approaches and instruments to enable a transition to a green economy;  
Source: ten Brink et al, 2012**



## 5.0. STATUS OF NATURAL CAPITAL ACCOUNTING

Rwanda's Natural Capital Account is an extension of the System of National Accounts that helps to describe the economy's use of natural assets, such as land, water, forests, and minerals. The Economic Development and Poverty Reduction Strategy and the National Strategy for Transformation aim to ensure that development in Rwanda protects the environment and builds resilience to threats posed by climate change, while sustaining economic, social, and cultural growth. Natural Capital Accounting is an approach for analysing trends and trade-offs in the use of the country's land, water, minerals, and ecosystem assets. This requires translation of the findings of the NCA into designing and implementing policy actions to conserve, protect and restore natural capital - and yes, this can take us beyond GDP to inclusive measures of wealth<sup>15</sup>.

*As companies face increasing risks related to climate change and resource scarcity, it's critical that we fully account for the natural capital upon which our businesses rely.*

**Peter Grauer Chairman,  
Bloomberg"**

## 5.2. Mineral resources Accounts

<sup>15</sup> Government of Rwanda (NISR, RMB). 2019. Natural Capital Accounts for Mineral Resource flows.

The mineral accounts contribute to the gross domestic product (GDP) and exports in addition to employment opportunities to many therefore it was imperative to have such accounts to understand the consistent time-series data to be able to examine the social and environmental costs arising from mineral extraction and raising concerns on mitigating and adapting those issues.

### **5.3. The Land Accounts**

The Natural Capital Accounts for land provided basic information about the land assets, changes in land use and land cover, land availability and productivity, as well as potential for and constraints to agricultural growth, which is a key pillar of Rwanda's development agenda. Land Accounts add value in sustainable development planning by providing indicators and trend analysis to track performance targets for sustainability, land allocation, service delivery, and productivity<sup>16</sup>.

### **5.4. Water Accounts:**

Water was identified as a key resource for household uses, agricultural production, and economic growth. Therefore, Water accounts provided useful information on water supply and use within the economy and exchange with the natural environment. Integrating with the national economic accounts allows comparisons to economic growth and jobs by sector, as well as measures of productivity and efficiency<sup>17</sup>.

### **5.5. Ecosystems Accounts:**

Rwanda has also done the ecosystem accounts, which were built on the prior land and water accounts, using land cover analysis for the years 1990, 2000, 2010, and 2015 coupled with modelling of soil and water variables that describe landscape processes and ecosystem services. Rivers, lakes, wetlands, forests, woodlands, shrub lands, farmlands and plantations offering a wide range of services to Rwanda and its citizens. For example, rivers supply water for abstraction but also water for diluting pollution, and while farmlands supply food, farms can supply soil erosion prevention and ground water recharge. Consequently, natural capital can be considered ecological assets, which supply large volumes of ecosystem services to both rural and urban

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<sup>16</sup>Government of Rwanda (NISR, Ministry of Environment and Ministry of Lands and Forestry), Natural Capital Accounts for Land, March 2018.

<sup>17</sup> Government of Rwanda (NISR, Ministry of Environment). Natural Capital Accounts for Water, June 2019. Kigali, Rwanda.

households. Computing the size, condition, and trends over time in natural capital is important in understanding current and future supplies of services such as water yields, erosion control, flood reduction and food yields, this coupled with mitigation, and adaptation strategies are aimed at achieving Green Economy status.

**Table 6. Studies of the total economic value of ecosystem services in Rwanda**

<b>Forest type</b>	<b>Economic value</b>	<b>Source</b>
Nyungwe mountain forest	US \$4.80 billion in 2014	Rwanda 6 <sup>th</sup> National Report to the Convention on Biological Diversity. Kigali: Republic of Rwanda (RoR).
Rugezi wetland	US \$375 Million in 2014	Rwanda 6 <sup>th</sup> National Report to the Convention on Biological Diversity. Kigali: Republic of Rwanda (RoR,2020)
Mukura Landscape	The TEV of was estimated US \$1,468,211 per year. The monetary benefits from the Mukura landscape translate into a value of US \$817 per hectare per year, which is comparable to the most productive forest landscapes	Rwanda 6 <sup>th</sup> National Report to the Convention on Biological Diversity. Kigali: Republic of Rwanda (RoR,2020)
Akagera Wetland Complex	The total value of the includes a stock value (carbon storage) of US \$1.1 billion, and an annual flow value of US \$11.9 million;	Rwanda 6 <sup>th</sup> National Report to the Convention on Biological Diversity. Kigali: Republic of Rwanda (RoR,2020)

## **6.0. Mapping of Stakeholders (state and non-state) with their contribution to greening of the economy**

Key stakeholders were mapped key (state and non-state actor's) in the Environment Natural Resources sector aimed at achieving the green economy. ENR is a cross cutting sector (agriculture, energy, and tourism, housing, health, macroeconomic management, gender, and social development among other). So improved coordination among different areas is key in achieving the green economy status for Rwanda.

Since the ENR is a cross cutting issue, it intersects with areas agriculture, energy, tourism, housing, health, macroeconomic management, gender, and social development, among others. In this context, a key priority of the sector strategies is improved coordination among partners in



terms of programming, activity implementation and funding. At the Central Government level, key ministerial stakeholders include:

- The Ministry of Environment (MoE);
- Ministry of Agriculture, Animal Resources (MINAGRI) and affiliated agencies: Rwanda Agricultural Board (RAB) and National Agricultural Export Development Board (NAEB)
- Ministry of Infrastructure (MININFRA) and affiliated agencies; Water and Sanitation Corporation (WASAC) and Rwanda Energy Group (REG)
- Ministry of Trade and Industry (MINICOM)
- Rwanda Development Board (RDB)
- Ministry of Local Government (MINALOC)
- Ministry of Health (MoH)
- Ministry of Education (MINEDUC)
- Ministry of Foreign Affairs and Cooperation (MINAFFET)
- Ministry of Finance, Planning and Economic planning.
- Rwanda Utilities Regulatory Agency (RURA)
- Rwanda Standards Board (RSB)
- Rwanda Water Resources Board (RWB)
- Rwanda Forestry Authority (RFA)
- Rwanda Land Management and Use Authority (RLMUA)
- Rwanda Meteorological Agency (Meteo Rwanda)
- Rwanda Environment Management Authority (REMA)
- Centre of Excellence in Biodiversity and Natural Resources Management (CoEB)
- Rwanda Mining, Petroleum and Gas Board (RMB);
- Rwanda Environmental Management Authority (REMA)\
- The Rwanda Green Fund, FONERWA

#### **6.1. Other stakeholders include/non-State actors**

- Non-governmental Organizations (NGO) for example Institute of Policy analysis and Research has conducted the Policy gap analysis for the implementation of the Rwanda's submitted Intended National determined Contributors (INDC)

- Development partners (EU, UNDP, GIZ, DFID, USAID, WB) to mention but a few, have funded multiple studies to assess Rwanda's status in attaining green economy status.
- Academic institutions (Public and private universities), The University of Rwanda supports research activities related to the Rwanda's status in transitioning to the Green Economy status
- Think tanks
- Media houses.
- Local authorities.
- Private sector Federations,
- Rwanda cooperative agency (RCA) and more others.

## 6.2. Challenges faced by Rwanda in transitioning towards the green economy status

Irrespective of the existing current green initiatives, some challenges do still exist. From the perspective of dynamic, macro-level exogenous factors influencing the ENR sector, the increasing pressure of a young, dense, growing, and urbanizing population on Rwanda's natural resources poses a central a challenge and an opportunity for Rwanda. Key related challenges include that 96% of rural households<sup>18</sup> rely directly on predominantly subsistence agriculture for their livelihoods, working on fragmented plots of 0.24 ha on average<sup>19</sup> compared to 2012 levels, by 2032 the total number of households is expected to increase from 2.4 million to 5.3 million and over 100% increase. Within 20-year period, urban populations are projected to quadruple from 0.4 million households to 1.6 million, with rural areas adding 1.7 million new households<sup>20</sup>.

Population growth along with other interrelated drivers of increased standards of living and economic development will add pressure to the already strained environmental capital resources (agricultural land, forests, wetlands, rivers, lakes, etc.), causing further land fragmentation and productivity constraints in rural areas as well as unplanned settlements and pollution if not properly anticipated and managed in expanding urban areas.

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<sup>18</sup> NISR, EICV4. Cited from Rwanda's Strategic Plan for Agricultural Transformation (PSTA 4).

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

Without management foresight, land use planning and management challenges around rationalization of competing activities (namely agriculture, industrialization, urbanization, and natural ecosystems) will grow. Moreover, future climate change is likely to lead to new risks: the negative impacts seen from today's climate variability are likely to become worse.

Average annual temperatures will continue to rise, 0.9 degrees Celsius to 2.2 degrees Celsius by the mid-21st Century, relative to the period 1970 to 1999. Whilst changes in average annual rainfall or frequency of droughts are less certain, higher temperatures are likely to increase the intensity of rainfall events, contributing to flash flooding and erosion<sup>21</sup>

**Key pertinent challenges that still face the Environment and Natural Resources include in Rwanda include.**

- Weak human technical capacity including monitoring and evaluation and integrated management and information systems.
- Coordination issues across sectoral mainstreaming and engaging civil society and private sector actors and
- Inadequate and unpredictable finances, these issues are predominantly surfacing within crosscutting sub-sectors of Forests, Meteorology, Environmental Management, Land, Mining and Water.
- High competition among forestry, land, and water resource users, due to the high demand in terms of limited available land for agriculture, forestry and agroforestry purposes to support biomass needs, water for irrigation, industry and domestic needs, as well as related requirements to sustain regulatory and provisioning functions of critical ecosystems, e.g., wetland, lakes and rivers. For example, agriculture and high population pressure have led to cultivation on fragile land on slopes of 30 degrees or greater, which are intended to be used for forestry activities to stabilize soils in accordance with the National Land Use Master Plan.
- Unproductive forest management practices that is exacerbated by illegal cutting of forests, uneven distribution of forest resource over the country and limited space for

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<sup>21</sup> Add ref to GCF PPF feasibility work.

plantations, low productivity of manmade forests, predominance of one species (Eucalyptus) and poor agroforestry practices. As a result, demand for forest products outweighs supply. According to EICV4, 99.3% of households utilise biomass energy for cooking, representing a dramatic shortfall against the Vision 2020 and EDPRS 2 target of 50%. In addition to this, wood remains the widely used material in construction of houses, where 40.7% of houses have their walls built of tree poles and mud. Moreover, although Rwanda has successfully almost reached its target for 30% forest coverage, the quality and utility of these resources needs to be closely assessed within a sustainable forest management framework.

- Weak land use planning across competing interests and high levels of land degradation resulting in non-optimal utilization of resources. At present, national and District-level land use master plans are not aligned, and governance systems are not in place to rationalize, harmonize, monitor and enforce implementation. This is exacerbated by low levels of compliance with the national land use master plan. In addition, with 70% of incomes deriving largely rain-fed agriculture, Rwanda's land and soil resources are a cornerstone of its natural capital, but also one of the most critically degraded. Due to its steep and hilly topography, intensive farming, lack of fallowing and reduced mulching practices, land degradation in Rwanda has been a well-known phenomenon for decades. Berry et al. 2003 estimated the cost of land degradation in Rwanda at 3.5% of agricultural GDP<sup>22</sup>.
- Climate related impacts from floods, landslides and droughts result in economic losses, and undermine economic development gains. This situation is further complicated by limited awareness, understanding of environmental, and climate change issues particularly in productive sectors. Scarcity of water resources adversely impact agricultural productivity and increases potential for rising epidemics and loss of life. Extreme weather events already negatively impact the economy and climate change could result in annual economic losses of just under 1% of GDP by 2030<sup>23</sup>. This vulnerability was illustrated by

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<sup>22</sup> L. Berry, J. Olson, and D. Campbell, 2003. Assessing the extent, cost and impact of land degradation at the national level: findings and lessons learned from seven pilot case studies

<sup>23</sup> Stockholm Environment Institute, 2009. Economics of Climate Change in Rwanda

the prolonged dry season in the Eastern province in 2016 affecting severely the 5 Districts (Kayonza, Gatsibo, Kirehe, Nyagatare and Ngoma).

- Inadequate solid and liquid waste management particularly in urban areas contributes to the spread of waterborne diseases and other hygiene related illnesses, hence increasing cost for ensuring public health. As an example, in Kigali city, 60% of the population depends on shallow pit latrines and solid waste is dumped into open dumping sites. Rapid urbanization, as well as geographic and temporal disparities in water availability, makes it difficult to supply water to certain areas. Increased competition for water resources is compounded by weak coordination among sectors and is evident in the planning and utilization of water resources. Cases of sectoral conflicts in water use have been reported at various levels, increasing the urgency for the implementation of a strong water governance framework. There is a need for the department in charge of IWRM to fast track some quick win projects proposed in the master plan that can improve in water resources management in Rwanda.
- The main source of water pollution in rural areas is the application of chemical agricultural inputs, The proportion of households using chemical fertilizers and pesticides increased from 24% in 2006 to 29% and 31% in 2011 and 36.4 and 29.3 in 2014 respectively. The challenge is managing this pollution while simultaneously encouraging agricultural transformation and intensification for economic growth and sustainable livelihoods.
- In mining, despite the current signs of revitalization, the sub-sector works far below its capacity, relying largely on small scale mining that is export oriented and contributes to the environmental degradation<sup>24</sup>.
- Emerging issues with urbanization and industrial development, namely point and non-point pollution, including solid and hazardous/toxic waste management.
- Limited availability of modern meteorological infrastructure and competent personnel to facilitate rapid translation of weather and climate data and information into high-quality products tailored to user needs, guided by up-to-date research and monitoring that meets international standards, e.g., forecasting, and early warning programmes.

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<sup>24</sup> Earth Systems working draft, 2017. Strategic Environment Assessment for the Mining and Minerals Policy of Rwanda

## 7.0. Case study of existing Green initiatives

As a country that aspires to rapid economic growth, Rwanda has set a broad and inclusive national target, known as Vision 2020. The idea is to bring all Rwandans into the country's development journey, integrating green growth and climate resilience strategies. For more than a decade, Rwanda has taken a proactive approach and put environment and climate change at the heart of all the country's policies, programs, and plans. It was one of the first countries to ban plastic bags, for instance. In addition to its commitment to nationwide landscape, restoration is such that every year, Rwandans plant millions of trees to protect the country's forests, rivers, and wetlands. It is anticipated that all these initiatives will make Rwanda a developed, climate-resilient, and low-carbon economy by 2050<sup>25</sup>.

**Table 7. show the details of the existing initiatives**

<b>Green Initiatives</b>	<b>Status</b>
<b>Plastic bags ban</b>	<p><b>Observation:</b> Rwanda's mission to maintain a clean and healthy environment has been going since 2008 when it banned the use of non-biodegradable plastic bags and packaging materials.</p> <p><b>Action:</b> To date, Rwandans use only bags made from paper, cloth, banana leaves and papyrus, among other biodegradable materials. It has made a difference. The plastic-bag ban has earned the country a reputation as one of the cleanest countries in Africa. In 2008, Rwanda's capital, Kigali, was declared one of the cleanest cities in Africa by UN Habitat. It also created opportunities for entrepreneurs who invested in alternative packaging materials (cloths, papers, banana leaves and papyrus).</p>
<b>Forest cover restoration</b>	<p><b>Observation:</b> To achieve its goal of increasing forest cover to 30% of total land area by 2020,</p> <p><b>Action:</b> Rwanda has embarked on massive reforestation and tree-planting drive, and new measures such as agro-forestry and training schemes in forest management are being implemented. These efforts, along with the plastic-bag ban, earned the nation a Future Policy Award from World Future in 2011.</p>
<b>Ecosystem Restoration</b>	<p><b>Observation:</b> Rwanda's commitment to conserve the environment.</p> <p><b>Action:</b></p>

<sup>25</sup> <https://www.weforum.org/agenda/2016>

	<p>This has been witnessed through.</p> <ul style="list-style-type: none"> <li>• The protection and restoration of degraded ecosystems such as wetlands, lakes and natural forests. Forests such as Nyungwe, Gishwati and Mukura have been restored and upgraded into national parks.</li> <li>• The transformation of Nyandungu wetland into an eco-tourism park;</li> <li>• The promotion of parks to attract and be home of vast variety of flora and fauna , a condition that has contributed to the growth of the tourism sector that is currently the principal generator of foreign currency- Earned US\$ 304.9m, and US\$ 318m revenues in 2014 and 2015 respectively. with the current data projected to be slightly above.</li> </ul>
<b>Wetland Restoration</b>	<p>Located in the northern part of Rwanda, Rugezi wetland (which had dried up because of human activities and climate change) was rehabilitated in 2005.</p> <p><b>For this, Rwanda received a Green Globe Award in 2010</b></p> <p>Its restoration led to the recovery of water levels, increased hydropower production in Burera and Ruhondo lakes and a boost for the country’s fishing sector.</p> <p>Rwanda set out on an ambitious journey to incorporate Forest landscape Restoration (FLR) into its national development strategies. The approach became intertwined with the socio-economic transformation goals of the <u>Economic Development and Poverty Reduction Strategy</u> and <u>Vision 2020</u>, and provided a roadmap to achieve 30% forest cover by 2020.</p>
<b>The Green Fund</b>	<p>As one of the most vulnerable nations to climate change, Rwanda is acutely aware of the challenges that lie ahead. Therefore, to achieve its vision of a low-carbon and climate-resilient economy by 2050, Rwanda has established a <u>Green Fund</u>, FONERWA, a ground-breaking investment fund, the largest of its kind in Africa. The fund supports the best public and private projects that have the potential for transformative change and that support Rwanda’s commitment to building a green economy.</p> <p>The fund has so far mobilized around \$100 million to date and is a leading example of the impact that well-managed climate financing can have.</p>

Other commended case studies that encompass principles of green economy like equality, public participation include

- i. The GoR has since November 2020 launched a four-year project titled “Building the capacity of Rwanda’s government to advance the National Adaptation Planning process” with the aim to increase the capacity of the government, private sector and communities to plan, fund, implement and monitor climate change adaptation across the country. Project is funded by the Global Environment Facility (GEF) and being implemented by REMA.

- ii. The GoR has also embarked on the transformation journey of the Eastern Province through climate adaptation approved in July 2021, which is a project aimed at restoring ecosystems, transforming degraded fragile landscapes into climate-resilient agriculture, and supporting the development of markets and value chains<sup>26</sup>.
- iii. The GoR is also implementing The Green Gicumbi project aimed at increasing the resilience of vulnerable communities to climate change in Northern Rwanda by targeting a range of integrated climate adaptation interventions.
- iv. The GoR has developed management plans of four out of its nine catchments within the government's Integrated Water Resources Management (IWRM) framework, a project that is financed under the Water for Growth project. Additionally, priority degraded areas in five catchments have been rehabilitated under the Water for Growth project, the Green Fund (FONERWA) as well as the 2010-2018 Land Husbandry, Water Harvesting and Hillside Irrigation (LWH) project implemented under the third and fourth Strategic Plans for Agricultural Transformation<sup>27</sup>. The Government of Rwanda has shown strong efforts in protecting the environment, mitigating climate change, and adapting to its effects, and tremendous achievements have been recorded. These include:
  - a) 24,000 hectares of land protected against soil erosion.
  - b) 120,000 people supported to cope with the effects of climate change.
  - c) 88,000 households with improved access to off-grid clean energy.
  - d) 46,900 hectares of forests and agroforest coverage planted
  - e) 126,000 tons of carbon dioxide equivalent to emissions avoided.
  - f) 31,000 hectares of watershed and water bodies protected.

## **8.0. Recommendations for the transition to a Nature Positive Green Economy**

To ensuring the continuity in achieving a nature positive green economy, an economy that restores, protects, and maintains nature, the GoR Should.

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<sup>26</sup> GCF, 2021

<sup>27</sup> PSAT-III 2012-2017 and PSTA-IV 2028-2024



- Strengthen the national capacity for transformation to an inclusive green economy through increased knowledge and application of economic policy instruments, organizational change, and the building of national systems and transparent institutions.
- Continue to mobilise funding for nature-based solutions (NbS) to climate change. Several countries that include NbS in their NDCs have made these conditional on external support. Therefore, mobilising more funding would enable greater and more effective action on the ground. It would also support building capacity to research, design and implement cost-effective and equitable NbS policies and actions at national, subnational, and local levels.
- The continuous engagement of Rwandan communities, private sector and NGOs in the transition to a nature positive green economy will contribute significantly to these climate change-related activities through public-private partnerships.
- Continued collaboration with the regional, continental and world leading institutions and experts in Natural Capital accounts of all sectors as mentioned in Nationally Determined Contributions and as reported in the latest Rwanda's Adaptation Communication to the United Nations Framework Convention on Climate Change.
- Identify and implement incentives for the private sector and research institutions to undertake Research and Development and develop affordable and appropriate adaptation and mitigation technologies.
- Engage with global Multilateral Environmental Agreements relevant to adaptation as cited in the recently published state of environment report (SOER) 2020 that indicated that Rwanda has fully complied with the reporting obligations for the Ramsar Convention on Wetlands and the World Heritage Convention and to continue domestication of continental Agenda 2063 and SDGs into Rwanda's national development agenda as such as Vision 2050, National Strategy for Transformation (NSTI, 2017-2024), and programmes and plans specific to climate change mitigation and adaptation;
- Keep updating its Nationally Determined Contributions and align them with the emerging greener technologies especially in the field of energy generation, renewable energy technologies that have proved to be much more cost-efficient with less adverse impacts on climate change.

- Establish a national policy specific to Natural capital accounts in Rwanda, so that nature is considered while setting national plans and incorporated into the Country economic forecasting processes
- Align NDCs with other relevant national plans and international processes. For example, NDCs could be aligned with National Adaptation Plans and National Adaptation Programmes of Action, as well as with other relevant international policy processes outside the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. Particularly, in relation to NbS, it could be beneficial for NDCs to have more explicit links with the Sustainable Development Goals and the other two Rio Conventions, and with national plans and targets associated with these targets. These include the Aichi Targets and National Biodiversity Strategies and Action Plans (NBSAPs) under the Convention on Biological Diversity (CBD) and the Land Degradation Neutrality (LDN) targets under the United Nations Convention to Combat Desertification (UNCCD). It would also be beneficial to develop common frameworks and indicators for reporting and tracking NbS-related actions under these. Nature-based Solutions in Nationally Determined Contributions.
- Step up NbS actions that address climate change adaptation and mitigation as well as support sustainable development and biodiversity conservation. This would help to develop integrated climate, development and biodiversity agendas and action plans. For example, countries could prioritise ecosystem restoration that both enhances carbon storage and contributes to adaptation, and favour protecting and/or restoring biodiverse and climate-resilient natural ecosystems (as opposed to establishing plantations with single non-native species). Actions that promote such synergies should be prioritised for funding, whether direct actions or enabling conditions.
- Strengthen the Monitoring programs for all government commitments in achieving the green economy status (Status of Submitted INDC);
- Implement responsive environmental actions to mainstream Green Growth across all relevant sectors. Some green actions for consideration as the country continues to 'build back better' after the COVID-19 Pandemic include:
  - Optimal management of natural capital (land, water, forests, environment).
  - Full access to high quality, renewable, sufficient & affordable water, and energy resources.
  - Phase out of charcoal/wood as primary energy sources.

- Climate resilience across productive sectors, namely agriculture and energy.
- Healthy and environmentally friendly surroundings, with low pollution and high biodiversity and ecotourism, for national and international benefit.
- Use the national climate finance momentum for resource mobilization to finance cross sector priorities in order to achieve robust climate and environment results.

## **9.0 Conclusion**

Even though Rwanda has made tremendous and impressive achievements towards the realization of a green economy through the integration and mainstreaming of climate and environment into its development planning vision and strategy, notably through the Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon Development of 2011. It is important to note that the momentum should be maintained since the impacts of climate change are becoming increasingly apparent, and the importance of the environment can no longer be questioned. The attainment of the green economy is evident with continued nexus of national, regional, and global policies, strategies and continued national commitment to multilateral agreements; where transitioning to a green economy requires a paradigm change in how sectors are traditionally viewed and a broadening of perspective. The green economy is relevant to all economic sectors in both the urban and rural areas. Therefore rural-urban interlinkages are also important, because the green investments and activities in rural areas can contribute to green economic growth in urban areas and vice versa. With the emerging of more inclusive policymaking approaches around the world, Rwanda needs to continue strengthening public support for green and fair programs and mainstreaming social inclusion into green policymaking.

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