



Republic of Rwanda  
Ministry of Environment

# **NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN**

**NBSAP (2025-2030)**

“

There is no trade-off between economic growth and protecting our environment. They complement each other. When we protect our environment, we are also taking care of ourselves. **The more we put effort in conservation, the more benefits we amass. This means that the communities will even benefit more.**

”

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**H.E. Paul Kagame**

PRESIDENT OF THE REPUBLIC OF RWANDA







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## Dr. Bernadette Arakwiye

MINISTER OF ENVIRONMENT  
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## FOREWORD

Rwanda's natural wealth, including its forests, wetlands, water bodies, species, and ecosystems, is more than a source of national pride. It is the foundation of our people's well-being, our economy, and the definition of who we are today and who we want to be in the future. When you look at the majestic mountain gorillas of the Virunga Massif or the restored wetlands of Kigali, biodiversity is a vital connector of life. In Rwanda, these connections are visible every day. It links the air we breathe, the food we grow, the water we drink, and the culture we carry forward.

This **National Biodiversity Strategy and Action Plan (NBSAP) 2025-2030** is Rwanda's renewed pledge to safeguard our biological diversity for the present and generations to come. It is Rwanda's blueprint for living in balance with nature while pursuing prosperity. The good news is that we are not starting from zero. We are building on the progress of the 2016-2020 NBSAP, which saw the expansion of protected areas like the recognition of Gishwati-Mukura as a UNESCO Biosphere Reserve, the return of iconic species, the restoration of degraded ecosystems, and stronger community stewardship. This updated plan reflects both our national ambitions and our global responsibilities

under the **Kunming-Montreal Global Biodiversity Framework**. The urgency is clear. Biodiversity faces growing pressure from habitat degradation, unsustainable resource use, and the effects of climate change.

Yet Rwanda's bold leadership and community choose not to retreat in the face of these challenges. Instead, we act guided by science, informed by traditional knowledge, and driven by a shared vision of harmony between people and nature.

This NBSAP 2025-2030 sets out **22 clear national targets**, integrated across all sectors of our economy. It is both a strategic framework and a call to action: to restore ecosystems, embed biodiversity in decision-making, empower communities, especially women and youth, and mobilise resources at scale. We must rethink how we use land, produce food, finance development, and value nature, not as a resource to be extracted but as a system to be respected, restored, and shared equitably. In doing so, we transform biodiversity from a conservation goal into a national development priority.

The updated NBSAP serves as both a mirror and a map: a mirror of where we stand and a map of where we must go. Our legacy will be measured not only in hectares restored or species protected but in the choices we make today for the people, the planet, and the generations that will walk this land after us.



## ACRONYMS

<b>AMC</b>	Akagera Management Company
<b>AP</b>	African Parks
<b>ARCOS</b>	Albertine Rift Conservation Society
<b>ARECO</b>	Association Rwandaise des Ecologistes
<b>BIOCOOR</b>	Biodiversity Conservation Organisation
<b>BL</b>	BirdLife International
<b>CAVM</b>	College of Agriculture and Veterinary Medicine
<b>CBC</b>	Community-Based Conservation
<b>CBD</b>	Convention on Biological Diversity
<b>CBO</b>	Community-Based Organisations
<b>CDD</b>	Community Driven Development
<b>CHT</b>	Conservation Heritage Turame
<b>CITES</b>	Convention on International Trade in Endangered Species of Wild Fauna and Flora
<b>CMIP6</b>	CMIP5 - Coupled Model Intercomparison Project Phase 6
<b>CoEB</b>	Center of Excellence in Biodiversity and Natural Resources Management
<b>COP</b>	Conference of Parties
<b>CPCIC</b>	Cleaner Production and Climate Innovation Centre
<b>DDS</b>	District Development Strategy
<b>DFGFI</b>	Dian Fossey Gorilla Fund International
<b>EIA</b>	Environmental Impact Assessment
<b>GD</b>	Gorilla Doctors
<b>GEF</b>	Global Environment Facility
<b>GGCRS</b>	Green Growth and Climate Resilience Strategy
<b>GHG</b>	Greenhouse gas (GHG)
<b>GIZ</b>	Deutsche Gesellschaft für Internationale Zusammenarbeit
<b>GMNP</b>	Gishwati-Mukura National Park
<b>GMO</b>	Genetically Modified Organisms

<b>GoR</b>	Government of Rwanda
<b>GVLYC</b>	Greater Virunga Landscape Youth Constituency
<b>GVTC</b>	Greater Virunga Transboundary Collaboration
<b>HGANPP</b>	Human Appropriation of Net Primary Production
<b>HWC</b>	Human Wildlife Conflict
<b>IGCP</b>	International Gorillas Conservation Program
<b>ITPGRFA</b>	International Treaty on Plant Genetic Resources for Food and Agriculture
<b>IUCN</b>	International Union for Conservation of Nature
<b>K-M GBF</b>	Kunming Montreal Global Biodiversity Framework
<b>LAFREC</b>	Landscape Approach to Forest Restoration and Conservation
<b>LCIA</b>	Life Cycle Impact Assessment
<b>LIME</b>	Lifecycle Impact Assessment Method based on Endpoint Modelling
<b>M &amp; E</b>	Monitoring and Evaluation
<b>MEA</b>	Multilateral Environmental Agreements
<b>MINAGRI</b>	Ministry of Agriculture and Animal Resources
<b>MINECOFIN</b>	Ministry of Finance and Economic Planning
<b>MINEMA</b>	Ministry in Charge of Emergency Management
<b>MININFRA</b>	Ministry of Infrastructure
<b>MoE</b>	Ministry of Environment
<b>NBSAP</b>	National Biodiversity Strategy and Action Plan
<b>NGO</b>	Non-Governmental Organisation
<b>NISR</b>	National Institute of Statistics of Rwanda
<b>NLUMDP</b>	National Land-Use and Development Master Plan
<b>NST</b>	National Strategy for Transformation
<b>OECD</b>	Other Effective Area-based Conservation Measures
<b>PES</b>	Payment for Ecosystem Service
<b>RAB</b>	Rwanda Agriculture and Animal Resources Development Board
<b>RBIS</b>	Rwanda Biodiversity Information System
<b>RCA</b>	Rwanda Cooperative Agency



<b>RCP</b>	Representative Concentration Pathways
<b>RDB</b>	Rwanda Development Board
<b>RECOR</b>	Rwanda Environmental Conservation Organisation
<b>REMA</b>	Rwanda Environment Management Authority
<b>RFA</b>	Rwanda Forestry Authority
<b>RGF</b>	Rwanda Green Fund
<b>RICA</b>	Rwanda Institute for Conservation Agriculture
<b>RU DP</b>	Rwanda Urban Development Project
<b>RWB</b>	Rwanda Water Resources Board
<b>RWCA</b>	Rwanda Wildlife Conservation Association
<b>RYBN</b>	Rwanda Youth Biodiversity Network
<b>SACOAL</b>	Sabyinyo Community Livelihoods Association
<b>SDGs</b>	Sustainable Development Goals
<b>SEA</b>	Strategic Environmental Assessments
<b>TEV</b>	Total Economic Value
<b>TNC</b>	The Nature Conservancy
<b>TREPA</b>	Transforming Eastern Province Through Adaptation
<b>UNDP</b>	United Nations Development Programme
<b>UNEP</b>	United Nations Environment Programme
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organisation
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>UR-CST</b>	University of Rwanda, College of Science and Technology
<b>USAID</b>	United States Agency for International Development
<b>VIIRS</b>	Visible Infrared Imaging Radiometer Suite
<b>VNP</b>	Volcanoes National Park
<b>WCS</b>	Wildlife Conservation Society
<b>WEA</b>	Wild Earth Allies (WEA)
<b>WRI</b>	World Resources Institute



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## PREFACE

Rwanda, in line with many other countries, continues to advance its commitments under the Convention on Biological Diversity (CBD). Article 6 of the Convention requires Parties to develop National Biodiversity Strategies and Action Plans (NBSAPs) and to integrate biodiversity conservation and sustainable use into sectoral and cross-sectoral activities.

In 2022, Rwanda endorsed the Kunming-Montreal Global Biodiversity Framework (GBF) through COP 15 Decision 15/6, which reaffirmed that NBSAPs are the primary instrument for implementing the Convention at the national level, while national reports remain the key tool for monitoring and reviewing implementation of both the CBD and the GBF.

NBSAPs are now central to the enhanced planning, monitoring, reporting, and review mechanism of the Convention under the GBF. Adopted at COP 15, the GBF outlines an ambitious pathway to achieve the global vision of **"living in harmony with nature by 2050."** Rwanda's revised NBSAP reflects an extensive analysis of the current state and trends in biodiversity conservation and sustainable use. Its preparation drew upon contributions from ministries, academic institutions, the private sector,

and civil society organizations through a highly participatory process that included inception workshops, expert consultations, data reviews, and a national validation workshop.

The NBSAP not only integrates and domesticates the GBF but also aligns with Rwanda's national Vision 2050, the second National Strategy for Transformation (NST2); legal and strategic frameworks. It is intended to serve as a practical reference for policymakers, practitioners, and stakeholders helping to identify priority challenges, shape targeted strategies, and implement actions that will support Rwanda in meeting its CBD commitments and Kunming-Montreal Global Biodiversity Framework (GBF).

Rwanda remains deeply committed to building on our past achievements, maintaining momentum, and addressing the ongoing threats to biodiversity. The participatory development of the NBSAP and this national report provide a strong foundation for advancing the Sustainable Development Goals (SDGs), safeguarding ecosystems, and improving the well-being of the Rwandan people.

Looking ahead, Rwanda will continue to rely on the collaboration and support of all stakeholders. Together, we can realize the vision of a green, resilient, and sustainable future for the country.



## ACKNOWLEDGEMENT

The revised and updated National Biodiversity Strategy and Action Plan (NBSAP) is a product of valuable contributions from various stakeholders who play various roles in the management and conservation of biodiversity in Rwanda. The Rwanda Environment Management Authority (REMA), as the national implementing body of CBD, led the revision of the NBSAP on behalf of Government of Rwanda, with financial support from the Global Environment Facility (GEF) through United Nations Environment Program (UNEP) project titled: "Global Biodiversity Framework-Early Action Support".

Led by REMA, in collaboration with the International Union for Conservation of Nature (IUCN), experts and representatives from several ministries and departments, public institutions, the private sector, national and international organizations, NGOs, and community-based organizations provided inputs through various consultative workshops held to complete this revision. We also extend our sincere appreciation to all contributors who actively participated in the preparation of the revised NBSAP by providing data, comments, and valuable reviews of this report.

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## EXECUTIVE SUMMARY

Biodiversity and ecosystem services in Rwanda are crucial across ecological, economic, cultural, and social dimensions, forming the backbone of the country's sustainable development. These natural resources are indispensable in supporting livelihoods, agriculture, tourism, and environmental health.

National Biodiversity Strategies and Action Plans (NBSAPs) serve as the primary tool for implementing the Convention on Biological Diversity at the national level. During the implementation of the 2016-2020 National Biodiversity Strategy and Action Plan (NBSAP), Rwanda made notable progress in biodiversity conservation and sustainable use.

Key achievements included the expansion and enhanced management of protected areas; forests now occupy about 30.4 percent of the total land area, the designation of Gishwati-Mukura National Park as a UNESCO Biosphere Reserve, and the increased engagement of local communities in biodiversity management. The country also improved the conservation of endangered species, such as the mountain gorilla, and successfully reintroduced flagship species like white rhinos and lions to Akagera National Park as part of Rwanda's wildlife restoration efforts.

Community involvement in biodiversity management was further strengthened, ensuring local participation in conservation efforts. The successful restoration of biodiversity resources highlights the country's commitment to reversing biodiversity loss and promoting ecosystem resilience. From the restoration of forests and wetlands to the recovery of key species and the active involvement of local communities, Rwanda's efforts set a strong foundation for continued conservation and sustainable use of natural resources.

Despite these significant accomplishments, challenges continue to hamper biodiversity conservation and its sustainable use. Key issues include habitat degradation and biodiversity loss due to agricultural expansion, overexploitation of natural resources, pollution, the spread of invasive alien species, human-wildlife conflict and the impacts of climate change.

An assessment of the 2016-2020 NBSAP highlighted key areas for strengthening, including the need for increased financial and technical support, enhanced integration of biodiversity considerations across sectors, improved policy coherence and coordination, greater public awareness of biodiversity and ecosystem values, and more robust data systems to support monitoring and information sharing.



After the adoption of the Kunming–Montreal Global Biodiversity Framework (K–M GBF), the Conference of the Parties to the Convention on Biological Diversity called upon its members to revise and update their National Biodiversity Strategies and Action Plans to align with Article 6 of the Convention.

The updates must be consistent with the goals and targets established in the K–M GBF, including those pertaining to means of implementation. In response to the global commitment and to address the above challenges, and building on previous successes, this updated National Biodiversity Strategy and Action Plan (NBSAP) has been developed through an inclusive process. The plan underscores Rwanda's commitment to biodiversity conservation, the sustainable use of biological resources, and the equitable sharing of benefits derived from genetic resources.

It sets out 22 national targets, which have been aligned with the Kunming–Montreal Global Biodiversity Framework to ensure that Rwanda's biodiversity national targets are in line with international commitments. The Kunming–Montreal Global Biodiversity Framework aims to halt and reverse biodiversity loss by 2030. Rwanda is fully committed to contributing to the achievement of these targets, both nationally and globally, through proactive measures and sustainable practices.

The revised NBSAP is founded on a strategic objective that builds on the Kunming–Montreal GBF vision by ensuring that Rwanda's natural wealth and biodiversity not only thrive but also serve as a foundation for sustainable development, benefiting present and future generations. To achieve effective biodiversity conservation and sustainable use, ensuring integration across sectors, the guiding principles for the NBSAP include:

**1**

**The NBSAP is designed as a "living document", intended to be responsive, adaptable, and practical in addressing emerging biodiversity challenges.**

**2**

**Biodiversity conservation will be integrated into economic decision-making processes, transforming it into a driver for national development and sustainable growth.**

**3**

**Key economic sectors will incorporate biodiversity conservation and sustainable use initiatives within their strategic planning frameworks and allocate dedicated funding in their annual budgets for upcoming years.**

In this regard, the updated NBSAP of Rwanda aims to integrate biodiversity into all aspects of governance, land use, and development, contributing to sustainable growth and environmental protection. Rwanda is already taking significant and specific steps to incorporate the long-term vision of the CBD Kunming-Montreal Global Biodiversity Framework into its national biodiversity policies. The existing REMA Strategic Plan (2022-2026) is an important step in this direction as it prioritises ecosystem and biodiversity protection and restoration.

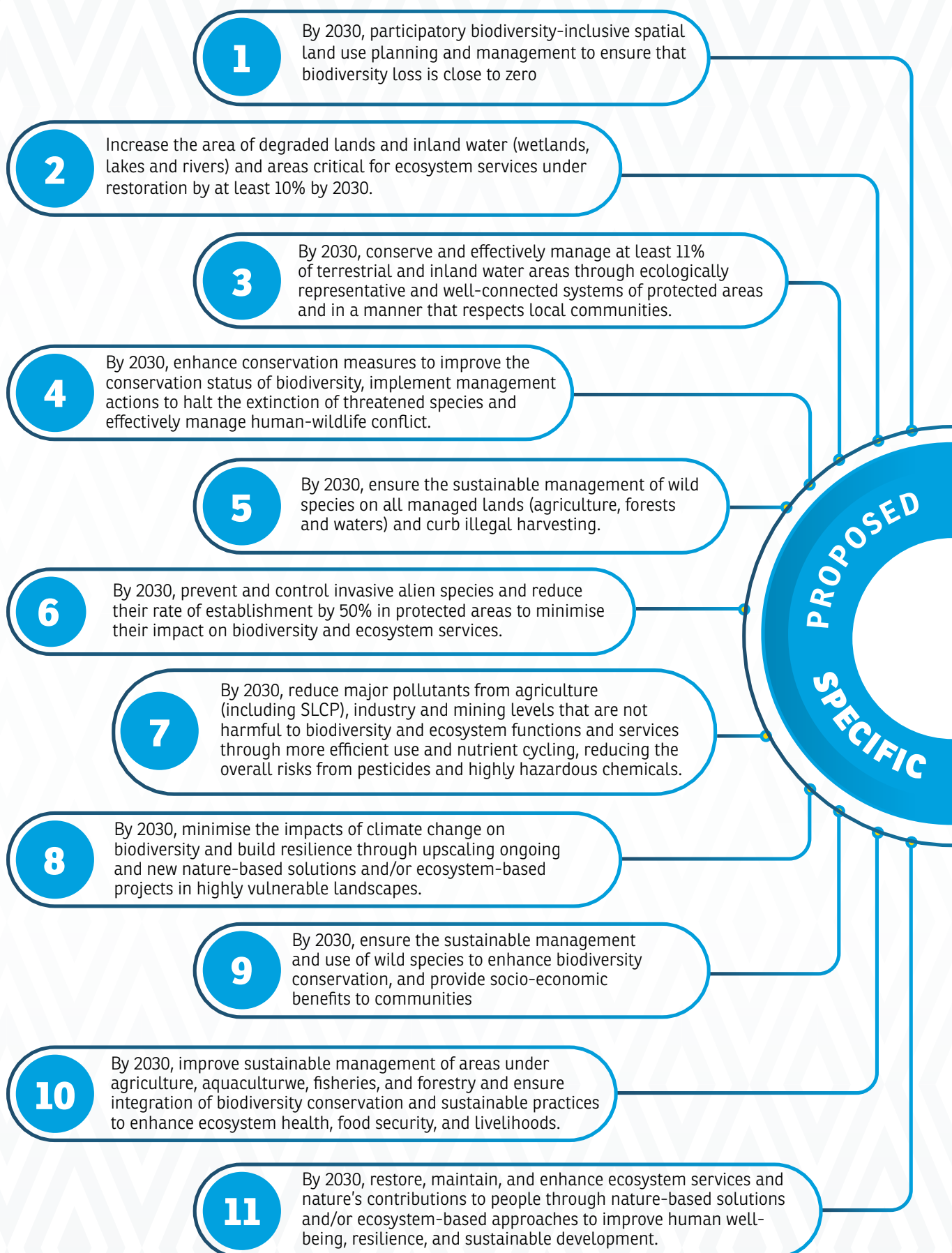
Over the five years, efforts focus on restoring degraded ecosystems through agroforestry, wetland and riverbank rehabilitation while enhancing protected areas and biodiversity monitoring. Community participation and gender inclusion have been prioritised in all restoration and conservation activities.

The development of the Conservation Master Plan and the ongoing revision of biodiversity policy are other important steps. Additionally, the establishment of the National Climate and Nature Finance Strategy is directly related to the KM GBF global strategy to finance biodiversity, as agreed at the COP 16.

Based on the set targets (figure 1), sectoral action plans have been developed. Key sectors considered include agriculture, forestry, water, tourism, fisheries, and urban development. Climate change, gender, and youth considerations are cross-cutting themes that run throughout the NBSAP.

The Rwanda Environment Management Authority (REMA) will lead the coordination and monitoring of NBSAP implementation. Designated national institutions, each responsible for specific targets, will spearhead execution in collaboration with relevant stakeholders. This approach ensures effective implementation, accountability, and regular reporting on progress toward achieving national biodiversity targets.

**Figure 1. Targets for Rwanda's NBSAP in Line with the Kunming Montreal GBF**







# 1. BACKGROUND AND RATIONALE

## 1.1 BACKGROUND

Rwanda is a landlocked country located within the Great Lakes region of the central-eastern part of Africa, with a territorial area of 26,338 km<sup>2</sup>. The country's relief can be divided into four broad categories: the Congo-Nile Ridge, the Central Plateau, the lowlands of the East, and the Bugarama plains.

The Rwandan physical landscape is characterised by a topography that gradually rises from the east to the west, averaging an altitude of 1,250 m above sea level in the east and ranging between 2,000 and 3,000 m above sea level in the west (Figure 2). The main features of that predominantly mountainous topography are the volcano range in the northwest, culminating at 4,507 m above sea level, and the Congo-Nile Ridge stretching from southwest to northwest and culminating at 2,918 m above sea level. The country exhibits two rainy seasons (March to May and September to December) with corresponding dry seasons (January to February and from June to August). Annual rainfall generally transitions from 1,000 mm per year in the east to 1,800 mm per year in the west.

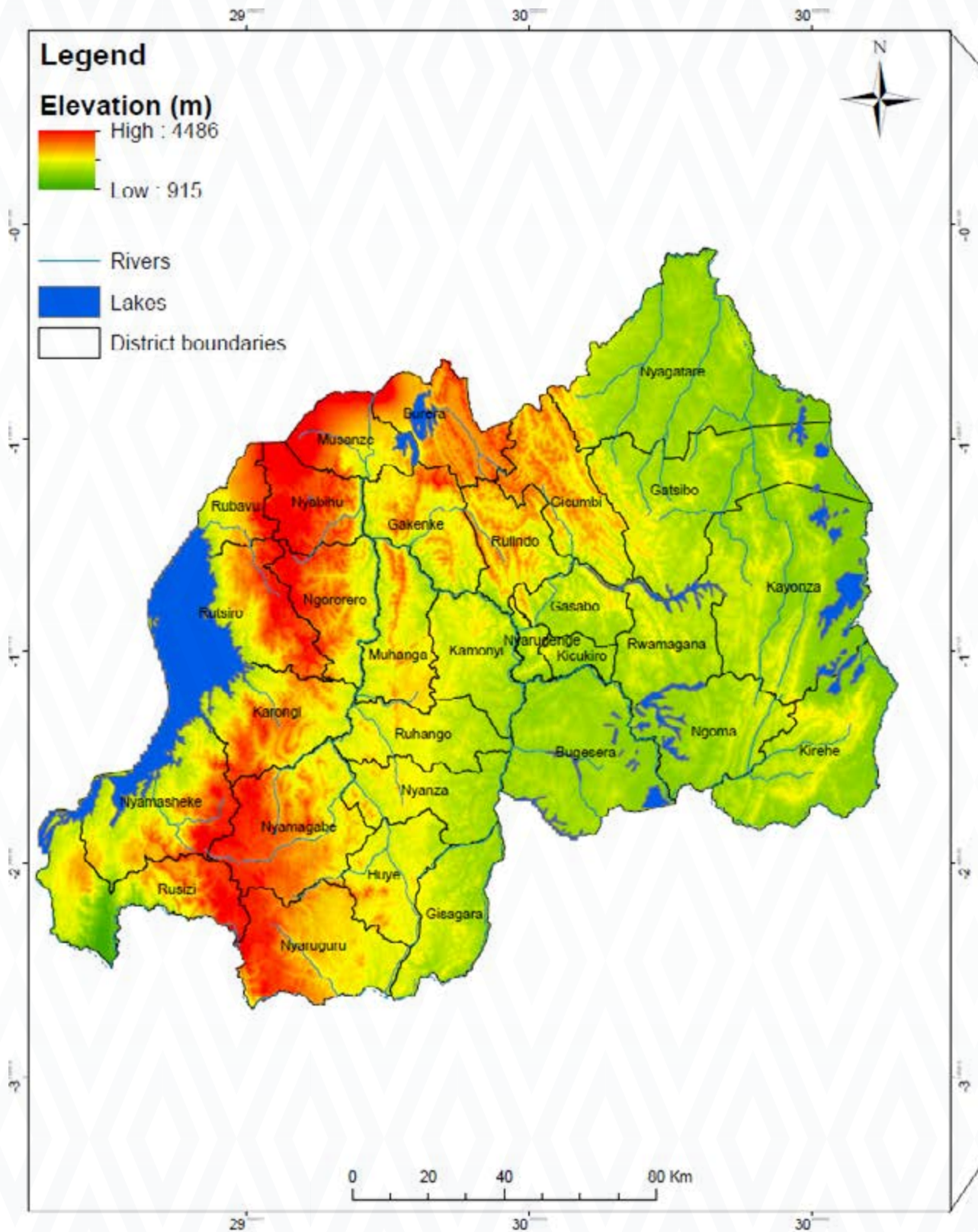
The temperature regime generally ranges from 20°C to 24°C in the lowlands to 16–17°C in the highlands. The variation in the terrain of the country has a direct impact on the ecology of the country. The country is home to a wide range of species and habitats, making it a key biodiversity hotspot in Africa. Rwanda's biodiversity is exceptionally rich and diverse, reflecting its unique geography, climate, and ecosystems.

Rwanda is endowed with a rich variety of habitats and ecosystems, including humid montane forests, savannahs, lakes, rivers, and wetlands. These diverse ecosystems support a wide range of biodiversity, including unique plant species and wildlife, which play a crucial role not only for the country's ecological health and resilience but also supporting socio-economic development.

The Albertine Rift region in Rwanda is one of Africa's most biologically rich areas, with high levels of endemism. It is worth mentioning that the Nyungwe National Park is home to over 1,000 plant species and serves as a critical water catchment for the Congo and Nile rivers (REMA, 2019).



**Figure 2: Rwanda and its topographical variation (IUCN 2024)**



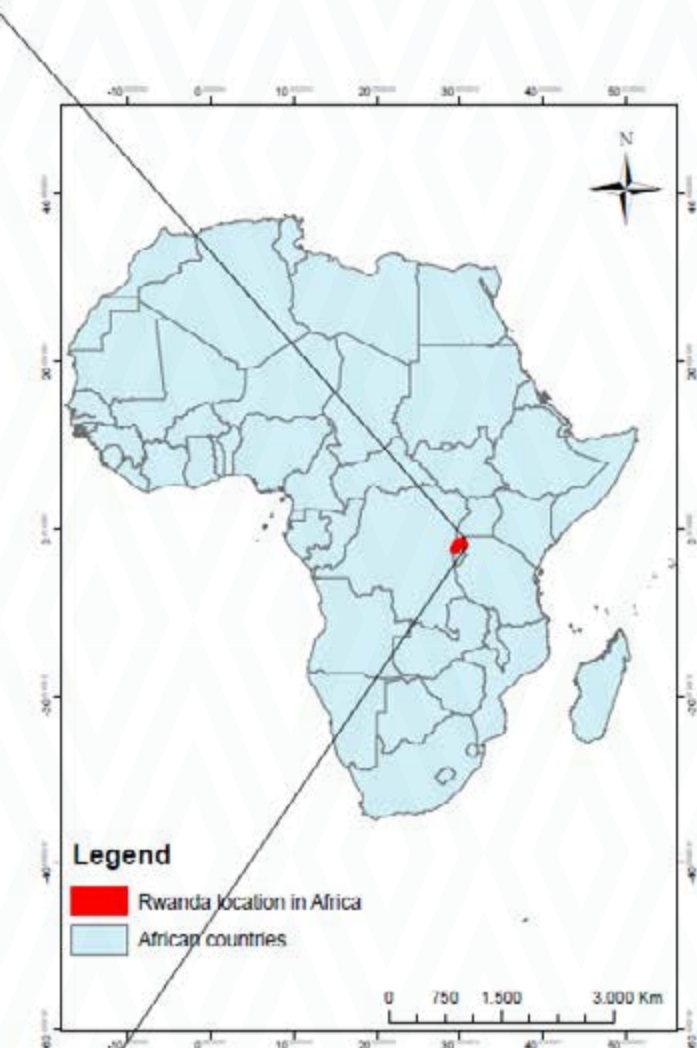
Similarly, the savanna ecosystem is rich in biological diversity. For example, Akagera National Park supports large mammal populations, including elephants, lions, and giraffes.

Biodiversity, ecological balance, and integrity are dependent on, in part, water resources. Rwanda is endowed with an abundance of water resources distributed in a dense hydrological network consisting of 861 rivers and 101 lakes, covering 149,487 ha (REMA, 2008). Rwanda has a total of 931 wetlands (Prime Minister's Order No 001/03 of 2024).

About 67% of Rwanda's national territory lies in the Nile Basin, which drains 90% of the country's waters through the Nyabarongo and Akagera rivers into Lake Victoria. Rwanda's wetlands also provide important ecosystem services such as water purification and flood regulation, while also supporting rich avian biodiversity and endemic species (REMA, 2014)

Furthermore, Rwanda's freshwater systems, including Lake Kivu, provide habitats for aquatic species and support local fisheries. These ecosystems are essential for water supply and the maintenance of biodiversity (REMA, 2020).

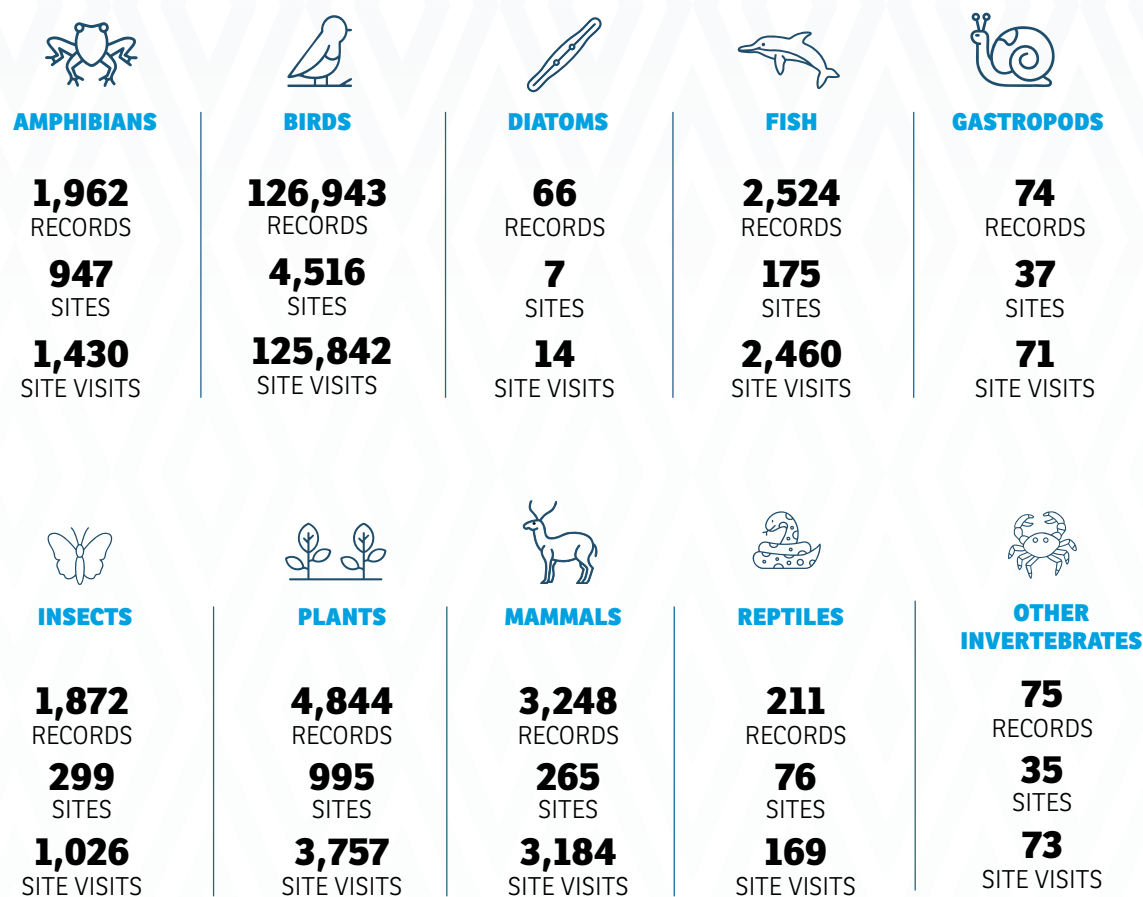
Rwanda's biodiversity is significant not only for its intrinsic ecological value but also for its role in supporting the country's socio-economic development, particularly through ecosystem services and nature-based tourism. Recognising the socio-economic and environmental importance of biodiversity and in line with its commitment at national and global levels, the Government of Rwanda has included a biodiversity agenda among the priority intervention areas as described in the government policy documents, such as Vision 2050.





Metrics for biodiversity species records in Rwanda, obtained from the Rwanda Biodiversity Information System (RBIS), are shown in Figure 3.

**Figure 3: Biodiversity Occurrence Records (Rwanda Biodiversity Information System-RBIS, December 2024).**



## 1.2 RATIONALE FOR THE NBSAP REVISION

A National Biodiversity Strategy and Action Plan (NBSAP) is a strategic framework developed by each Party to the Convention on Biological Diversity (CBD), as required under Article 6 of the Convention. Rwanda developed and implemented the 2016–2020 National Biodiversity Strategy and Action Plan (NBSAP), with a goal to achieve the Aichi Biodiversity targets while contributing to creating a nation that values and conserves nature. Implementation of this NBSAP was successful in addressing key biodiversity challenges and laying a foundation for sustainable biodiversity management.

Key achievements include milestones of at least 30.4% forest cover, expansion and management of protected areas such as the creation of the Gishwati-Mukura National Park (now UNESCO biosphere reserve), ecosystem restoration, species conservation and re-introduction, community involvement, and the integration of biodiversity into national development planning, among others. Key projects have included the Green Amayaga, the Landscape Approach to Forest Restoration and Conservation (LAFREC) project, Nyandungu Urban Wetland Ecotourism project (NUWEP), Green Gicumbi, building the capacity of Rwanda's government to advance the National Adaptation Planning Process (NAP), improving the efficiency and sustainability of charcoal and wood fuel value chains project, establishment of the Rwanda Biodiversity Information System, the ongoing Transforming the Eastern Province through Adaptation (TREPA) project, Rwanda Urbanization Development Project (RUDP), and the reducing vulnerability to climate change through enhanced community-based biodiversity conservation in the Eastern Province of Rwanda (COMBIO) project, among others.

While these projects have mainly focused on enhancing tree cover, other initiatives in Rwanda have greatly contributed to biodiversity conservation. The reintroduction of animals, has been an important element of Rwanda's drive to biodiversity restoration, for example, the reintroduction of lions and rhinoceros in the Akagera National Park in 2015, 2017, and 2021. The remarkable recovery of the crested cranes in Rwanda is an example of a successful biodiversity conservation project. These efforts have contributed to halting biodiversity loss and enhancing the resilience of ecosystems to climate change. However, there were implementation gaps, including limited financial resources, limited technical capacity, inadequate integration of biodiversity across sectors, insufficient policy coherence and coordination, low public awareness of biodiversity and ecosystem values, and gaps in data for effective monitoring of progress.

To address these gaps and following the adoption of CBD COP decision 15/6, there is a need to update Rwanda's NBSAP to align with the Kunming-Montreal Global Biodiversity Framework and to align it with the current national strategies, policies, and legal and institutional frameworks. This revised and updated strategy has 22 national targets that are aligned with the Kunming-Montreal Global Biodiversity Framework.



02

## 2. STATUS AND TRENDS OF BIODIVERSITY IN RWANDA

Rwanda is recognised for its remarkable biodiversity due to its location along the Albertine Rift, a biodiversity hotspot of global significance. Rwanda's proactive conservation strategies have yielded positive outcomes. The reintroduction of species such as lions and both black and white rhinos into Akagera National Park underscores Rwanda's commitment to restoring its natural heritage (RDB, 2025). Besides, Rwanda has seen localised successes in the increase of vertebrates' population as the population of mountain gorillas has shown signs of recovery due to concerted conservation efforts (RDB, 2018).

### 2.1 ECOSYSTEM AND SPECIES DIVERSITY

The country has diverse ecosystems ranging from montane forests to savannahs, wetlands, and lakes, supporting a variety of endemic and endangered species. Rwanda's key ecosystems include four national parks: Volcanoes National Park, Nyungwe National Park, Akagera National Park, and Gishwati-Mukura National Park, that collectively support critical habitats. These areas safeguard key species such as the mountain gorilla, grey crowned crane, and black rhino. Remnant forests also play a significant role in biodiversity conservation. Species diversity remains high, with 402 mammal species (about 40 percent of Africa's mammalian species); 1,061 bird species, 293 reptile and amphibian species and 5,793 higher plant species (REMA, 2019b). The mountain gorilla population has also increased significantly due to enhanced conservation efforts.

### 2.2. TRENDS IN HABITAT CONSERVATION

**Protected Areas:** Rwanda has made significant strides in biodiversity conservation by establishing and expanding protected areas. The Gishwati-Mukura National Park, for instance, was established in 2016 as the fourth national park and subsequently designated as a UNESCO World Biosphere Reserve in 2020, highlighting its global ecological importance. Conservation measures have expanded protected areas, including wetlands, buffer zone of lakes and rivers as well as islands to be listed amongst the protected public land (REMA, 2021). The Prime Minister's Order No. 001/03 of 30 January 2024 designates 35 swamplands in Rwanda as fully protected, meaning all forms of cultivation, grazing, and settlement are banned, except for



authorised scientific activities.

It marks approximately 2,000 hectares of wetland for strict protection and initiates processes to evaluate several of these for Ramsar Site status. The remaining 896 gazetted wetlands may be used under strict 30-year concession agreements for controlled activities such as tourism and agriculture. Conditional uses include agriculture, fish farming, recreation, tourism development, quarrying, research, and energy generation. The total area under protection in Rwanda is approximately 9.11%, with the National Land Use & Development Master Plan (NLUDMP) 2020-2050 land use balance sheet setting 37.7% of the country's land area to be set aside for conservation purposes.

**Forest Restoration:** Forest Landscape Restoration (FLR) approaches have significantly contributed to reforestation efforts, improving biodiversity and ecosystem services (REMA, 2019; 2020b). It is important to point out that forest cover in Rwanda has increased to approximately 30.4% of the total land area (REMA, 2020b), directly contributing to biodiversity conservation, as forests are home to a vast majority of the world's terrestrial species (SCBD, 2025). Increase in forest cover is attributed to the Government of Rwanda's intentional efforts to restore landscapes in line with its commitments, e.g., the Bonn Challenge, the nation's strong policies, community engagement through initiatives such as "Umuganda" and direct investments in afforestation and sustainable land management practices, including agroforestry. The country's efforts in implementing its Green Growth and Climate Resilience Strategy under the 'Sustainable Forests and Agroforestry' programme of action have played a critical role in the attainment of the 30.4% forest cover.

**Agro-Biodiversity:** Rwanda emphasises conserving genetic resources, including local crop varieties and animal breeds, which are essential for food security and resilience. Rwanda's Strategic Plan for Agriculture Transformation (PST) puts emphasis on sustainable agricultural land management practices to protect resources while enhancing land productivity. Key activities focusing on reducing soil erosion, improving soil water infiltration and holding capacity, and enhancing nutrient supply, ultimately help improve soil biodiversity.

For improved community-based biodiversity conservation, various actions have been undertaken, including:

- 1 Use of a community approach in landscape restoration and rehabilitation
- 2 Establishment of district environmental committees
- 3 Implementing a revenue sharing mechanism
- 4 The establishment of a Special Guarantee Fund to compensate cases resulting from human-wildlife conflicts

## 3. VALUES OF BIODIVERSITY AND ECOSYSTEM SERVICES

Biodiversity and ecosystem services are critical for sustainable development and poverty reduction. Rwanda's economy and development are dependent on natural resources, agriculture remains a major employer in Rwanda, employing about 64% of the working population (REMA 2021).

In Rwanda, these natural assets provide essential ecological, economic, cultural, and social values. They have considerable monetary value, contributing significantly to the country's economy through ecotourism, agriculture, water provision, and carbon sequestration.

### 3.1 ECOLOGICAL VALUE

Rwanda's biodiversity underpins critical ecosystem services, including water regulation, soil fertility improvement, and climate regulation. Forests such as the Nyungwe National Park play a pivotal role in maintaining the hydrological cycles that supply water to two of Africa's major rivers: the Nile and Congo (REMA, 2021). Similarly, wetlands in Rwanda have multiple benefits to the national economy and have been playing significant ecological roles, including contributions to agricultural production, hydrological functions, biodiversity reservoirs, peat reserves, mitigation of climate change, leisure and tourism and cultural value (REMA, 2009; CoEB, 2020).

The Rugezi Wetland, like other wetlands, plays a critical role in the country's environmental landscape, including the following:

**Hydrological Regulation:** The wetland acts as a natural reservoir, regulating water flow to downstream water bodies, particularly Lakes Burera and Ruhondo, and supporting hydropower production at the Ntaruka and Mukungwa power plants.

**Water Quality Management:** The wetland filters sediments and pollutants, enhancing water quality. Its peaty soils and vegetation trap sediments and remove impurities,



preventing downstream siltation and reducing the maintenance costs of hydropower plants and other water-dependent systems.

**Biodiversity Conservation:** Rugezi is home to unique biodiversity, including endemic and endangered species such as the Grauer's Rush Warbler (*Bradypterus graueri*), Papyrus Yellow Warbler (*Chrolopetta graciolateralis*) and endangered Grey Crowned Cranes. It provides critical habitats for aquatic species, birds, and other wildlife.

**Flood Control:** The wetland absorbs and slows down water during heavy rains, mitigating the risk of floods in surrounding areas. (Hategekimana and Twarabamenye, 2007; Marc et al., 2013; Gaspard et al., 2022). Forests and wetlands also contribute to carbon sequestration, helping mitigate climate change by absorbing greenhouse gases (REMA, 2021).

### 3.2 ECONOMIC VALUE

The economic valuation of biodiversity and ecosystem services for some protected areas in Rwanda showed significant contributions to the national economy (REMA, 2020): (i) The value of Nyungwe National Park was USD 4.8 billion in 2014, (ii) the Total Monetary Value (TMV) of Rugezi wetlands was USD 374 million, and (iii) the Total Economic Value (TEV) of Mukura Landscape was estimated at USD 1.4 million per year. Similarly, based on the economic assessment of Akagera Wetland Complex, a total annual flow of benefits from this wetland was estimated to be 12 million USD, with a total stock value of USD1.1 billion in carbon storage (REMA, 2019).

The economic value of ecosystem services provided by the Kigali City wetlands complex has been estimated at over \$22 million per year for provisioning services and approximately \$499,000 for regulating services (ARCOS, 2021). One of the most substantial monetary contributions of biodiversity in Rwanda comes from ecotourism. Tourism is a central sector in Rwanda's economy.

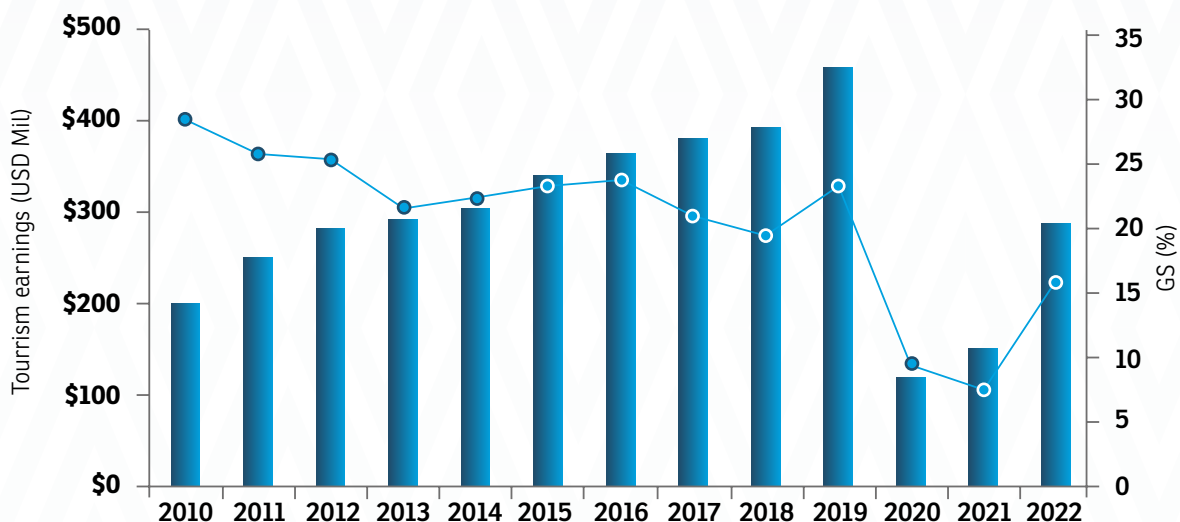
Before the COVID-19 pandemic, tourism was the largest export contributor to the economy. Generating nearly USD 500 million in 2019, the post-pandemic period has seen contributions of up to nearly USD 300 million in the first three quarters of 2022 (Figure 4). Of the nearly USD 500 million generated in 2019, most of it came from biodiversity-based tourism (RDB, 2020). For example, the economic valuation of tourism and recreation in Kigali City Wetlands Complex has a potential of USD 83,333 annually (ARCOS, 2021).

Mountain gorilla trekking in Rwanda, particularly in Volcanoes National Park, is a significant contributor to the country's tourism revenue. In 2024, Rwanda's tourism revenues grew by 4.3% to USD 647 million, driven by a 27% increase in gorilla tourism revenue (RDB, 2024), with nature-based tourism, which includes gorilla trekking – accounting for approximately 80% of this income (World Bank, 2023).

Therefore, mountain gorilla trekking, primarily in Volcanoes National Park (VNP), is a cornerstone of this success, generating approximately \$200 million annually, and revenue from this gorilla tourism also supports local communities through revenue-

sharing programs, with 10% of park revenues allocated to nearby communities for development projects (ARCOS, 2021). This revenue-sharing mechanism has motivated the community around the VNP to engage in different activities aimed at the protection and conservation of the park (Ndayisaba, 2020).

**Figure 4: Rwanda's tourism exports, 2010–2022 (World Bank)**



Note: GS: Goods and Services

A photograph of a forest floor covered in autumn leaves, with a large pile of orange and yellow leaves in the foreground. The background shows blurred trees and foliage. A white diamond-shaped pattern is overlaid on the right side of the image. A large white outline of the number '04' is positioned in the upper left quadrant.

04

## 4. DRIVERS AND CONSEQUENCES OF BIODIVERSITY LOSS IN RWANDA

### 4.1 DRIVERS OF BIODIVERSITY LOSS

Biodiversity conservation in Rwanda is at a critical juncture, with significant losses occurring in various countries and regions. In Rwanda, while, on one hand, the country has seen considerable successes including the significant recovery of the mountain gorilla population, the reintroduction of the black rhino and lions, and forest cover exceeding 30.4% of the land, there is still a reality of biodiversity and habitat loss at various scales (UNDP, 2023).

The 2016 Rwanda NBSAP outlines a range of threats to biodiversity. The interplay of pressures is mainly related to human-induced factors acting at different spatial and temporal scales (Van der Windt and Eichler, 2009). Figure 5 below shows a summary of the major drivers of biodiversity loss, not only in Rwanda but across the globe, according to UNEP (2022). Rwanda's biodiversity faces significant challenges from drivers such as climate change, land use change, invasive species, pollution and direct exploitation of natural resources, which have collectively contributed to habitat degradation, species decline, and ecosystem instability.

**Figure 5: Main Drivers of Biodiversity Loss (UNEP, 2022)**



CLIMATE  
CHANGE



LAND USE  
CHANGE



INVASIVE  
SPECIES



POLLUTION



DIRECT EXPLOITATION  
OF NATURAL  
RESOURCE USE

Outlined below are some of the major factors in relation to these drivers, leading to biodiversity loss in Rwanda.



### 4.1.1 Climate Change

Globally, climate change and its consequences present one of the most important threats to biodiversity and the functions of ecosystems. According to the Coupled Model Intercomparison Project Phase 6 (CMIP6) model ensemble, temperatures across Rwanda are expected to increase, and projections show a change in annual mean temperature from 1.1°C to 3.9°C by the end of the century. Global warming, including in Rwanda, is attributed to elevated levels of greenhouse gas emissions.

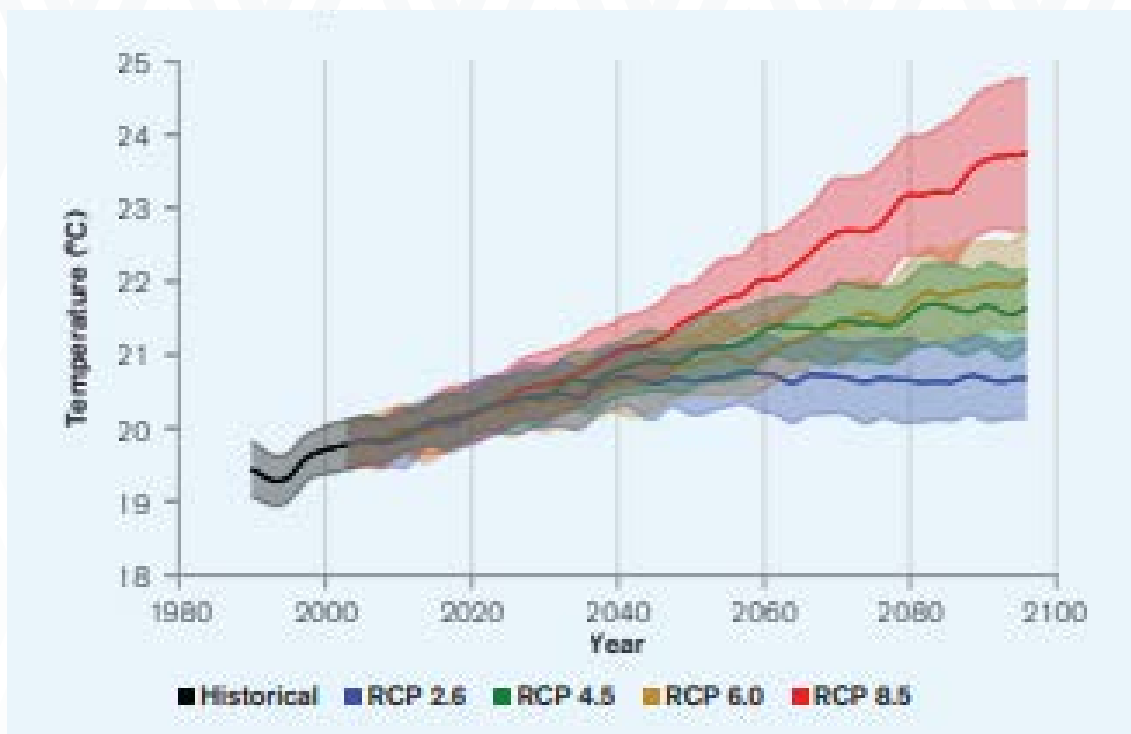
This is likely to be accompanied by increased duration of heatwaves by as much as 85 days through the end of the century; cold spells are also expected to reduce (World Bank, 2021). The country's eastern and central areas are expected to experience increased aridity and drought with temperature increase, in comparison to the western areas. For different RCPs there are variations in temperature trends in comparison to historical trends (Figure 6). An estimated 107 mammal, 199 bird, 31 fish, 34 amphibian, and 79 plant species in the Albertine Rift region are highly vulnerable due to thermal sensitivity and/or changes in habitat suitability induced by climate change (MoE, 2022).

The biodiversity sector is significantly vulnerable to climate change, with climate change impacting both physical habitats and species from droughts, floods, and landslides. Climate change exacerbates biodiversity loss through altered weather patterns, prolonged droughts, and extreme weather events. Species adapted to specific climatic conditions, such as high-altitude flora and fauna in Volcanoes National Park, are at risk of habitat loss. Wetland ecosystems, which are highly sensitive to climate fluctuations, are also affected by reduced water availability and increased flooding (REMA, 2021).

Habitat loss due to, e.g., floods and droughts is a key concern for Rwanda, as flooding due to climate-induced heavy rains results in severe soil erosion leading to biodiversity habitats being degraded and lost, while at the same time, water quality impairment is on the increase. This increased water quality impairment, because of the climate change-induced floods, has severe impacts on aquatic biodiversity. Climate change is also impacting wetlands through altering the hydrological regimes, which have negative impacts on biodiversity. The ecological health of Rwanda is connected to water resources. Despite being considered at low water risk, Rwanda is vulnerable to climate change.

A 2022 study of Rwanda's water resources response to climate change indicates that projections show a mild increase in surface runoff and groundwater recharge (RCP 4.5), while under RCP 8.5, the western part of the country will experience a significant decrease, and the eastern part will experience mild increases (World Bank, 2021). An increase in runoff will mean that there is reduced soil water storage and further depression of dry season water flows in rivers and streams. Generally, the water resources vulnerability of Rwanda is more pronounced in the eastern parts of the country, where rainfall is generally lower than in the western parts.

**Figure 6: Projected Annual Mean Temperature for Rwanda (Reference Period, 1986–2005) (World Bank, 2022)**



While Rwanda's contribution to global greenhouse gas emissions is relatively low, the country is vulnerable to the impacts of climate change. Changes in temperature and precipitation patterns can alter habitats and affect species distributions (REMA, 2011). For instance, climate change poses a threat to mountain gorillas in the Virunga Massif by affecting the availability of food resources and increasing the risk of disease transmission. Furthermore, climate change has led to more frequent droughts and floods, impacting water supply, agriculture, and natural ecosystems (REMA, 2011).

#### 4.1.2 Pollution

Pollution from agricultural runoff, industrial activities, and urban waste is a growing concern in Rwanda. Wetlands like Nyabarongo and Akagera are polluted by fertilisers, pesticides, and untreated wastewater, impacting aquatic biodiversity and ecosystem health. For instance, eutrophication in these wetlands has caused a decline in fish populations and water quality (REMA, 2021). The use of chemicals also impacts pollinators (bees), leading to a further reduction of biodiversity as pollination is curbed. Bees (among other pollinators) provide the important ecosystem service of ensuring that pollination and reproduction of plants occur. Any reduction of pollination agents leads to biodiversity loss.



## 4.1.3 Land Use Change

### 3.1.3.1 Agricultural Expansion and Intensification

The demand for land for farming is ever-increasing in Rwanda. Currently, agricultural land takes a vast proportion of most of Rwanda's land, occupying almost 12,000 km<sup>2</sup> with a plan to increase to 12,433 km<sup>2</sup> (47.2% of the total country's surface) and potentially up to 15,000 km<sup>2</sup> (NLUMDP, 2020). An increase in agricultural land has an impact on biodiversity and its habitats. It is linked to biodiversity, especially where no intentional plans exist for creating biodiversity corridors.

This is further exacerbated by agricultural intensification, which aims to increase land and crop productivity through increased use of inputs (seed, organic and mineral fertilisers, and pesticides). This intensification results in biological diversity reduction, which is compounded by intensively cultivated monoculture systems. Additionally, genetic erosion is also occurring in Rwanda with increased use of improved/exotic crop varieties that are from uniform genetic stock and are relatively vulnerable to pests and disease (REMA, 2009).

### 4.1.3.2 Expansion of Urbanisation, Housing, and Industry Construction

Urbanisation is an important element leading to biodiversity loss through altering ecosystems. The conversion of natural landscapes, including forests and marshlands/wetlands, into built-up environments for humans and industry results in fragmentation of habitats, pollution, and other tree/plant species, including invasive ones. To combat the impacts of urbanisation, Rwanda is making concerted efforts to ensure biodiversity loss is minimised through, for example, the adoption of a "No net loss of existing biodiversity strategy" in its Kigali Masterplan.

### 4.1.3.3 Human Population Increase

Rwanda's population has reached 13.25 million people as per the 2022 population and housing census, with an annual growth rate of 2.3%. The increasing population leads to increased demand for resources, including food and land. This therefore requires converting ecosystems for food production and therefore leading to habitat alterations. The impacts of agricultural expansion have been described earlier. Change/loss of habitats results in both plant and animal species that were previously inhabiting such lands now having to adapt to the newly established environments or go extinct.

### 4.1.3.4 Boundary Encroachment

Encroachment remains a major challenge for biodiversity conservation in Rwanda. Forest encroachment and deforestation are mainly in search of settlement, development of infrastructure, agriculture, and grazing land.

Volcanoes National Park (VNP) is one of the most important regions for biodiversity conservation in Africa (Panorama, unpublished). However, the park has been constantly under direct or indirect threat due to pressure from the farming population in search of fertile volcanic soils in its immediate vicinity. While major efforts are underway to support local communities in and around the park through a benefit-sharing mechanism, encroachment remains a challenge.

A 2020 study (ARCOS, 2020) showed that the wetlands of Rwanda continue to face the serious threat of encroachment, especially for agriculture. The Rugezi wetland, a peatland located in Burera and Gicumbi districts in Northern Province, covering 6,736 hectares, is an important landscape for the ecosystem services it supplies, including its biodiversity, water storage, and flow regulation.

The Rugezi wetland is listed under the Government of Rwanda's Prime Minister's Order no 001/03 of 30/01/2024 relating to swamplands, which details important swamplands of Rwanda, their characteristics, boundaries, and determining modalities of their use, development, and management. Despite various conservation efforts, wetlands have been severely impacted and degraded by human encroachment for activities that mainly include agriculture, water diversion for crop irrigation, livestock grazing and brick making.

#### **4.1.4 Direct Exploitation of Natural Resource Use**

##### **4.1.4.1 Poaching**

Poaching remains a threat to biodiversity in Rwanda. Illegal collection of plant material and wildlife hunting within protected areas is a big threat as communities in and around the protected areas seek livelihood support. While the traditional poachers in the local communities use snares, spears, bows and arrows, and dogs during hunting, there have been incidences where high-powered modern weapons have been used, e.g., in Akagera National Park (RDB, 2014), where large mammals are the main target of poachers.

To combat poaching, the Government of Rwanda has placed a high priority on providing security and the use of patrols and high-technology surveillance in the national parks and protected areas. Anti-poaching patrols and community education are important strategies. Additionally, the focus is on improving the livelihoods of nearby communities by offering economic opportunities, e.g., through benefit-sharing mechanisms for communities around Volcanoes National Park. However, the extent of poaching in remnant natural forests and other high-biodiversity ecosystems outside national parks remains a challenge. The challenge of leakage (because of conservation efforts) remains a risk.



#### 4.1.4.2 Wildfire Outbreaks

Fires continue to pose a threat to biodiversity conservation in Rwanda, especially during the dry season (June–Sept). While most of the fires are generally caused by human actions, it is likely that the elevated temperatures and lightning also play a significant role in the spread of the fires. Rwanda's key biodiversity zones are transboundary, and, therefore, in some cases, fires originate from outside Rwanda's territory. Some examples of transboundary fires include the following:

- In the Nyungwe-Kibira forest ecosystem, spanning Rwanda and Burundi, agricultural expansion and population pressures in these regions have led to increased fire incidents that threaten the integrity of this critical habitat.
- The Virunga Massif, which spans Rwanda, Uganda, and the Democratic Republic of Congo, has experienced fires that originated from neighbouring countries and impacted the habitat of the critically endangered mountain gorillas (Kayijamahe et al., 2016)

**Figure 7: Forest fires in the Bweyeye Sector of Rusizi District, August 2023 (The Forefront Magazine)**



#### 4.1.4.3 Unsustainable Mining

The mining sector in Rwanda, predominantly artisanal and small-scale, has been consistently identified as a serious threat to local biodiversity through significant land clearing, heavy use and impairment of water resources, and environmental degradation. A recent study (Muhira et al, 2021) in Gishwati Mukura Forest indicates that mining activities have resulted in significant erosion and accumulation of mine tailings with high concentrations of metals, which threaten aquatic and terrestrial life.

Mining activities result in the degradation of wetlands, as observed in a recent study (Harerimana and Mupenzi, 2021) at Mwogo Wetland, where mining at Nyamagana is negatively impacting water flows into the wetland, thus affecting the flora and fauna of the ecosystem. Sediment-laden water from the mining sites alters the wetland watercourse. The impacts of mining activities on biodiversity are mainly reflected through the alteration of water pathways, water quality impairment, and the destruction of the landscapes, which affects habitats.

Degradation of water resources from mining activities is manifested in increased sediment loads in river water (high turbidity) and the presence of heavy metals in the water, which is a major health risk for humans. Government efforts in establishing model mines are a strategy to reduce the negative impacts of mining on, in part, biodiversity and natural capital. Enhanced enforcement of regulations by, e.g., REMA, is also vital to mitigate and reduce the occurrences of illegal and unsustainable mining activities.

#### 4.1.4.4 Human-Wildlife Conflict

Human-wildlife conflict (HWC) is a growing challenge in Rwanda, particularly in areas bordering national parks and protected reserves. As human populations expand and land-use changes intensify, competition for space and resources between people and wildlife has increased, leading to crop damage, livestock predation, and, in some cases, threats to human safety.

Farmers living near parks such as Akagera National Park, Nyungwe National Park, and Volcanoes National Park frequently face challenges from animals like elephants, buffalo, and primates, which raid crops and damage property. The Government of Rwanda, alongside conservation organisations, has implemented mitigation measures such as constructing buffer zones and electric fences and promoting community-based conservation programs. However, sustainable solutions require integrated approaches that balance conservation priorities with local livelihoods.

One of the most significant cases of human-wildlife conflict in Rwanda has been recorded around Akagera National Park, where elephants, buffalo, and other large mammals frequently encroach onto farmland, causing economic losses for local communities. Before the park was fully fenced in 2013, crop raids by elephants and hippos were common, leading to strained relationships between the park and surrounding communities.



Human-wildlife conflict remains a concern, especially due to baboons and monkeys damaging community property. Baboons are mostly problematic in Nyagatare, Gatsibo, and Kayonza districts, particularly near Nyagatare town, just alongside the Muvumba River. In the Western and Southern provinces, baboons have been observed near Nyungwe National Park, especially in Nyamagabe and Nyamasheke districts, where they pose less risk. Monkeys cause damage in several districts, including Rusizi, Huye, and parts of Kigali, often living near forests. RDB reported that monkeys are not on the list of wildlife eligible for compensation.

In response, the Akagera Management Company (AMC), in partnership with the Rwanda Development Board (RDB) and African Parks, introduced a 120-kilometer electrified fence, which significantly reduced human-wildlife interactions. Additionally, a community compensation scheme was introduced to support farmers affected by wildlife incursions. Reports indicate that since the fence installation, human-wildlife conflict incidents have decreased by over 80%, improving both local livelihoods and conservation efforts (African Parks, 2021). This case highlights the importance of proactive mitigation strategies, community involvement, and infrastructure investment in addressing human-wildlife conflict while fostering coexistence between people and wildlife in conservation landscapes. However, it is necessary to conduct a comprehensive study to assess the extent of human-wildlife conflict in Rwanda in order to inform and enhance the existing mitigation measures.

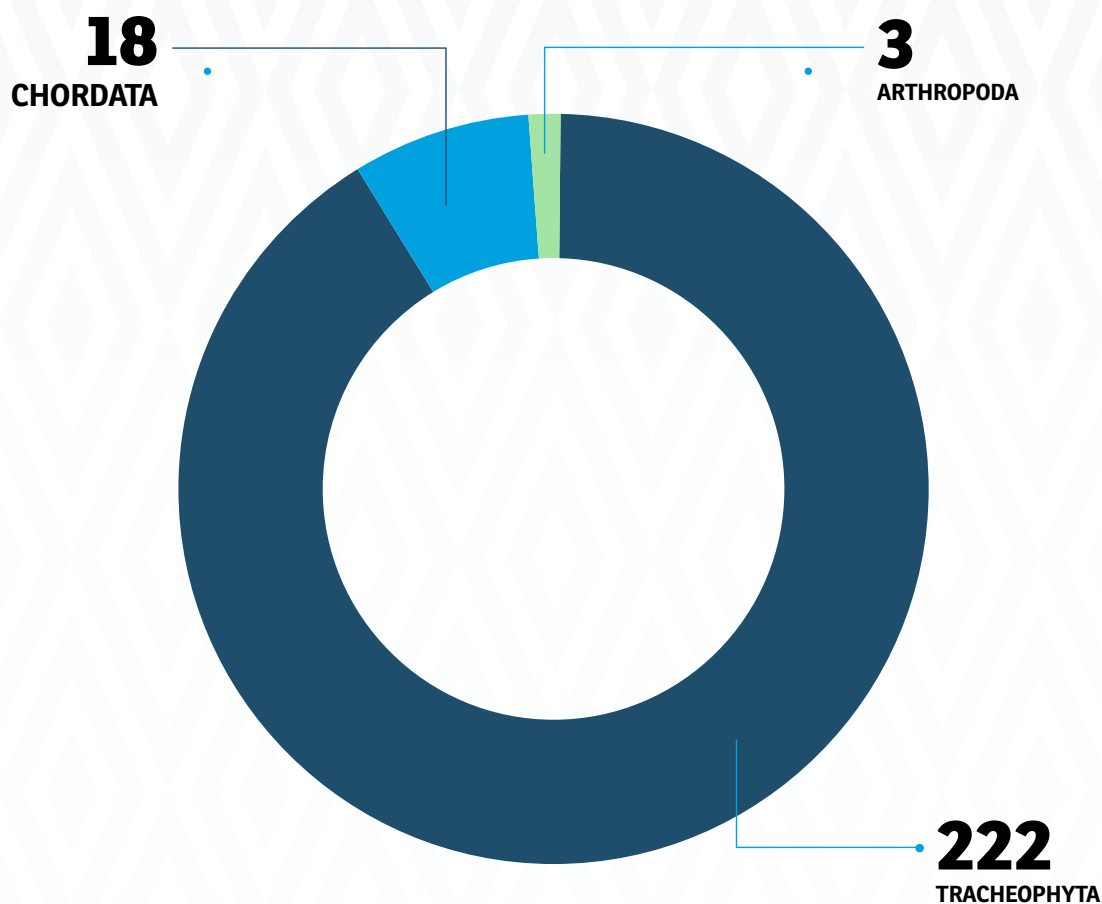
#### **4.1.5 Alien Invasive Species in Aquatic and Terrestrial Ecosystems**

Invasive alien species are species that become established in natural or semi-natural ecosystems or habitats, agents of change, and threaten native biological diversity (IUCN, 2000). Invasive species are a major driver of biodiversity loss across the globe. As per the IUCN Red List and Butchart (Butchart S.H.M., 2008), they are one of the most common threats to the extinction of a species.

The spread of invasive species is exacerbated by climate change, which fuels their spread while reducing the resilience of habitats to biological invasions. In Rwanda, there are 243 species classified as introduced (alien) and invasive alien species (Figure 8), as per the Global Register of Introduced and Invasive Species (GRIIS, 2024).

A 2016 assessment by REMA identified 47 invasive species in Rwanda. Some invasive species, e.g., *Lantana camara* and Water Hyacinth (*Eichhornia crassipes*), have been used as ornamentals due to their attractive flowers.

**Figure 8: Number of Species (by higher taxon) classified as Introduced and Invasive, in Rwanda (GRIIS, 2025)**



## 4.2 CONSEQUENCES OF BIODIVERSITY LOSS

The loss of habitat and biodiversity has adverse effects. These effects include direct impacts on the environment as well as subsequent effects on human livelihoods, including socio-economic development.

### 4.2.1 Consequences to Ecosystems

#### 4.2.1.1 Ecosystem Stability Compromised

Loss of biodiversity leads to the ecosystem's ability to rebound from shocks, e.g., extreme rainfall and heat. This makes ecosystems more vulnerable to disturbances such as climate change, pests, and diseases. When species are lost, the intricate balance of ecological interactions is disrupted, reducing the system's ability to recover from shocks and maintain essential functions.



#### 4.2.1.2 Decline in Ecosystem Services

Loss of land cover and forest cover leads to the ecosystem's inability to undertake essential ecosystem services such as carbon sequestration and improved water infiltration, leading to flood hazards and increased soil erosion hazards. Rwanda is experiencing some of these consequences, including increased soil erosion hazards and impaired water resources.

#### 4.2.1.3 Genetic Resource Loss

Cultivation of large tracts of land and mass planting of exotic species may cause genetic erosion through invasion and colonisation of monocultures. The Government of Rwanda is placing a high priority on establishing seed stands and botanical gardens for the genetic improvement of multipurpose, biodiversity-supportive, and climate-adapted tree/shrub/herb species.

#### 4.2.1.4 Risk of Species Extinction

With biodiversity loss, individual species can become extinct, and this has multiplier effects on interdependent species and a cascading adverse effect on the overall diversity of ecosystems.

### 4.2.2 Consequences to Human and Socio-economic Development

The loss of biodiversity has significant effects on human well-being and socio-economic development. Effects include:

#### 4.2.2.1 Compromised Food Security

Declining biodiversity has direct impacts on agricultural productivity. Sustainable agriculture is partly influenced by the contributions of insect pollinators, like bees, which provide a natural ecosystem service to more than 80% of known flowering plants, many of which are part of our diet (Yocgo et al, 2023).

#### 4.2.2.2 Human Health Impacts

Biodiversity plays a significant role in medicine development, including traditional medicine availability. Thus, loss in biodiversity means loss of potential sources of treatments for diseases. Additionally, the degradation of ecosystems means that human exposure to pollutants and pathogens is increased, leading to heightened disease threats.

#### 4.2.2.3 Economic Losses

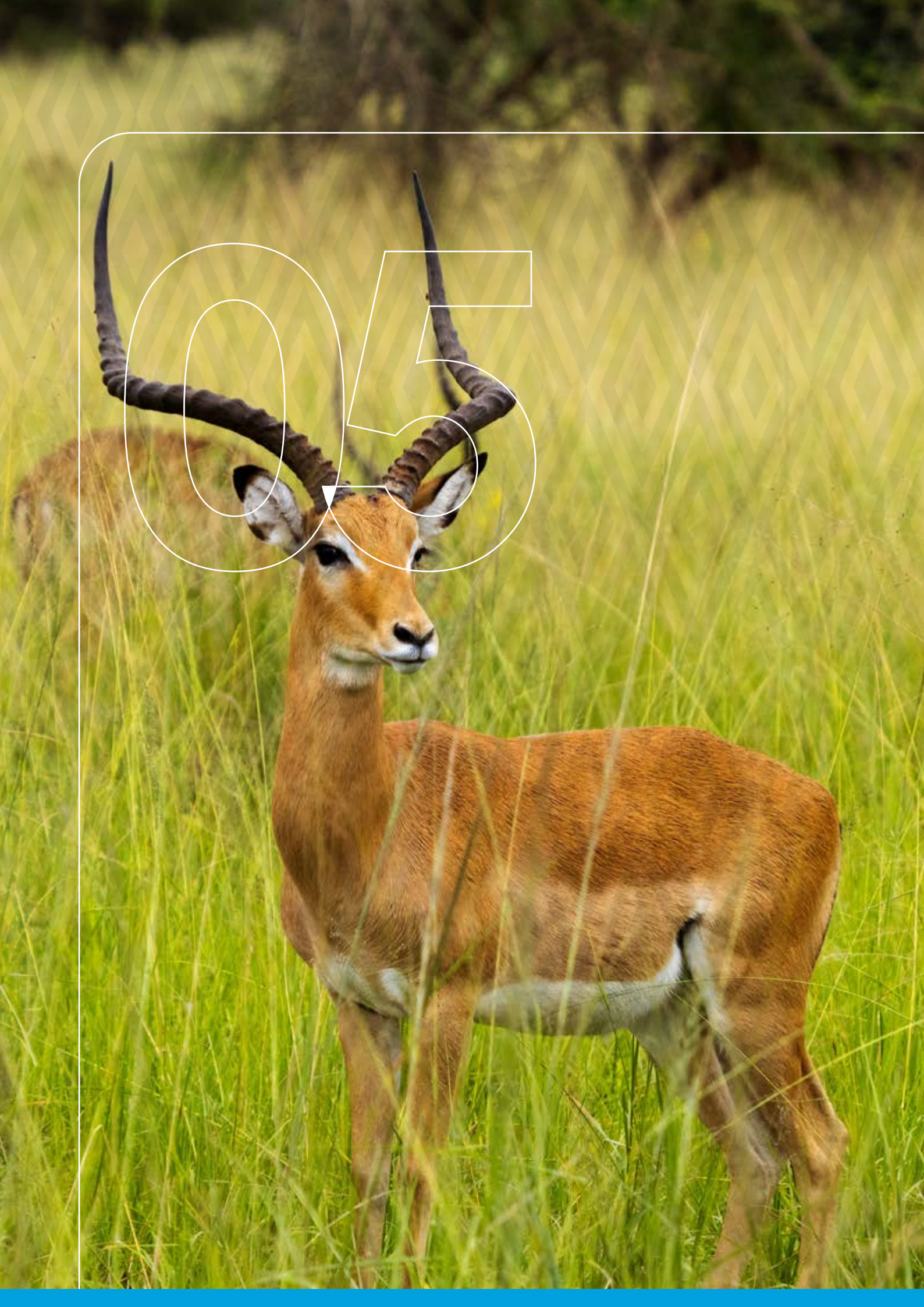
Rwanda's economy is heavily reliant on tourism. Biodiversity loss leads to a decline in the quality of nature tourism products and, therefore, reduced national income.

#### 4.2.2.4 Increased Vulnerability to Natural Disasters

Healthy, diverse ecosystems are important for providing a buffer from natural disasters. Extreme rainfall leading to increased threats of flooding is common in Rwanda. Diverse ecosystems with high forest cover are critical to reducing these threats.

#### 4.2.2.5 Reduced Resilience to Climate Change

Biodiversity plays an important role in enhancing the resilience of humans and ecosystems to climate change. Loss of biodiversity, e.g., from forest fires, can reduce this capacity.



## 5. NATIONAL POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

The review of relevant policies, regulations and institutional frameworks has been carried out to establish the effectiveness of existing regulatory instruments and institutional frameworks in the biodiversity conservation process.

In this regard, the analysis took into consideration the following aspects:

- 1 Institutional mandates, focusing on complementarities, duplication, overlapping or conflicting mandates.
- 2 The rationales and objectives of the policies.
- 3 The extent to which the policy statements contribute to biodiversity conservation.
- 4 Whether some policies conflict with biodiversity conservation and to what extent, and what is the motivation behind it.
- 5 Specific provisions of sectoral laws relevant or irrelevant for biodiversity conservation
- 6 Analysis of institutional roles and responsibilities regarding sustainable management of biodiversity.



## 5.1 KEY POLICIES AND STRATEGIES

Rwanda's biodiversity policy and planning framework is guided by a series of laws, strategies, and broader policy processes that integrate biodiversity conservation into national development plans. The country has made significant strides in embedding biodiversity considerations into its overarching environmental and socio-economic policies, aligning with global commitments such as the Convention on Biological Diversity (CBD). This framework is essential for maintaining ecosystem services that are critical for the country's development, resilience to climate change, and sustainable economic growth.

The Government of Rwanda adopted the Vision 2050 and the second National Strategy for Transformation (NST 2). As part of Vision 2050 and NST-2, environment and natural resources are important elements, with at least eight of the 13 goals of NST-2 having direct linkage to environment and biodiversity.

The Rwanda Green Growth and Climate Resilience Strategy was revised in 2022 to align with Vision 2050 while defining a development pathway for the country that is climate resilient and harnesses green economic innovation to drive the nation to its long-term strategic target for low-emission development. Overall, the high-level government commitment has paved the way for the development of the requisite policy and legal framework for the achievement of the goals of environmental conservation and sustainable management.

Rwanda adopted a Biodiversity Policy in 2011 and reviewed its National Law governing biological diversity in 2021. Furthermore, key policies, laws, and strategies have been adopted. These include Rwanda Wildlife Policy (2013), Rwanda Protected Areas Concessions Management Policy (2013), National Forestry Policy (2018) and National Agroforestry Strategy and Action Plan 2018–2027, National Policy for Water Resources Management (2011), Law on Environment of 2018, and Forestry Law (2013).

In 2019, the Rwanda Environment and Climate Change Policy was adopted with the overall goal for "Rwanda to be a nation that has a clean and healthy environment, resilient to climate variability and change that supports a high quality of life for its society. All these laws and policies are geared towards sustainable management and use of natural resources to ensure biodiversity is maintained and improved. The laws are crafted with a clear understanding of the impacts of human and natural factors on biodiversity. Major elements of some of these key policies and strategies are highlighted below:

- 1. National Environment and Climate Change Policy 2019:** The policy integrates biodiversity conservation into the broader framework of environmental protection and climate resilience. This policy emphasises the importance of conserving biodiversity for maintaining ecosystem services that support agriculture, water security, and human well-being.

It also promotes the restoration of degraded ecosystems, sustainable land management, and the use of green infrastructure in urban areas to preserve biodiversity in the face of rapid urbanisation. One of the policy objectives is to enhance functional natural ecosystems and manage biosafety with a policy declaration to conserve, preserve, and restore ecosystems and enhance their ecological functioning. Strategic directions under this policy include (i) conserve, preserve, and restore ecosystems and enhance their ecological functioning; (ii) promote sustainable management of wetlands; and (iii) ensure biosafety and precautionary adoption and use of biotechnology.

- 2. Rwanda Biodiversity Policy 2011:** The goal of this policy is to conserve Rwanda's biological diversity, to sustain the integrity, health and productivity of its ecosystems and ecological processes, whilst providing lasting development benefits to the nation through the ecologically sustainable, socially equitable, and economically efficient use of biological resources. The policy aims to provide an overarching framework for the conservation, sustainable utilisation, access to biodiversity resources and fair and equitable sharing of benefits derived from the resources.
- 3. National Forest Policy 2018:** The National Forestry Policy aims to restore forest cover and ensure the sustainable management of Rwanda's forest resources. Forests play a critical role in maintaining biodiversity, and the policy promotes reforestation, agroforestry, and community participation in forest management. Forestry policy is among the key tools in enhancing biodiversity conservation.
- 4. Protected Areas Law and Biodiversity Conservation:** (Law N 001/2023 du 13/01/2023 governing national parks and nature reserves and Law No 064/2021 of 14/10/2021 governing biological diversity). Rwanda's legal framework for biodiversity conservation includes specific laws on the protection of ecosystems and establishes a legal basis for the conservation and management of national parks, reserves, and other critical ecosystems. It mandates the creation of management plans for each protected area and encourages the involvement of local communities and the private sector in conservation efforts. Additionally, the Law on Environment of 2018 imposes penalties for illegal activities such as poaching and deforestation, providing a strong legal framework for biodiversity protection.
- 5. Revised Green Growth and Climate Resilience Strategy 2023:** The Green Growth and Climate Resilience Strategy integrates biodiversity conservation into Rwanda's broader vision of sustainable development. This strategy outlines key interventions for building a green economy, such as reforestation, ecosystem-based adaptation, and sustainable agriculture, all of which are designed to enhance biodiversity conservation while promoting economic growth and climate resilience. The strategy also emphasises the role of ecosystem services in reducing vulnerability to climate change and supporting livelihoods.



- 6. National Biodiversity Strategy and Action Plan (NBSAP) 2016:** Rwanda's primary policy instrument for biodiversity conservation is the National Biodiversity Strategy and Action Plan (NBSAP), which was revised in 2016 to align with the Aichi Biodiversity Targets and the Sustainable Development Goals (SDGs). The NBSAP sets out specific goals and actions aimed at halting biodiversity loss, restoring degraded ecosystems, and ensuring the sustainable use of natural resources. It includes measures to protect ecosystems such as forests, wetlands, and national parks while also addressing human-wildlife conflicts and promoting community-based conservation initiatives.

## 5.2 CROSS-SECTORAL INTEGRATION

Rwanda's biodiversity policy is also integrated into broader national development plans, such as the National Strategy for Transformation (NST2) (2024–2029), as it focuses, in part, on mobilising innovative tourism and conservation financing, regenerative conservation agriculture practices, and promoting nature-based tourism, which all have a foundation and direct impact on biodiversity conservation. The Vision 2050 plan similarly underscores the importance of maintaining ecosystem services and biodiversity for achieving long-term prosperity and environmental sustainability. These linkages ensure that biodiversity is considered in all sectors, including agriculture, mining, energy, and infrastructure development. The NLUDMP assessment grouped the environment into three key sectors, namely the natural resources, biodiversity protection and environmental quality sector (GoR, 2022).

## 5.3 LINKAGES WITH INTERNATIONAL CONVENTIONS

Rwanda is a signatory to several international environmental agreements (Multilateral Environmental Agreements - MEA), including CBD, the Convention on Migratory Species (CMS), the Ramsar Convention on Wetlands, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Paris Agreement, the Basel Convention, the Montreal Protocol on Substances that Deplete the Ozone Layer, the Rotterdam Convention, and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA), among others. These agreements provide a framework for national policies and encourage Rwanda to align its biodiversity goals with global conservation targets. Rwanda is also scaling up wetland conservation in line with the RAMSAR convention guidelines to scale up wetland conservation and restoration to deliver the K-M GBF Convention on Wetlands (2024) mandate.

## 5.4 LEGAL FRAMEWORK

The legal framework for the content of environment and biodiversity conservation starts with the Constitution of the Republic of Rwanda. Articles 53 and 169 of the Constitution speak directly to environmental conservation and protection. Rwanda's Law No. 48/2018 of 13/08/2018 on Environment establishes comprehensive measures for environmental protection, conservation, and promotion.

Furthermore, the Law governing biological diversity N° 064/2021 of 14/10/2021 in Rwanda of October 2021 is an important domestic legislation that promotes the conservation and sustainable use of biodiversity and its ecosystems. All of them underline the obligations of the State and individual citizens to protect the environment. In addition, the above-mentioned laws have preventive and punitive provisions for those who harm or destroy the environment in general and biodiversity in particular.

The No 001/2023 of 13/01/2023 Law governing national parks and nature reserves and nature reserves of 2023 and the Biosafety Law in 2024. Under these Laws, different ministerial orders have been developed and approved to ensure the implementation of the above laws and provide specific guidance on biodiversity protection. The Ministerial Order n° 005/MOE/24 of 25/10/2024 determining the size and management of a national park or nature reserve buffer zone determines the size and management of a national park or nature reserve buffer zone. It also determines the criteria for determining the size of a buffer zone.

## 5.5 INSTITUTIONAL FRAMEWORK

Institutions involved in biodiversity management in Rwanda are divided into six main categories, which are: government institutions, higher learning institutions, and Non-Governmental Organisations (NGOs), Community-Based Organisations (CBOs), local communities, and the private sector.

### 5.5.1 Government Institutions

In Rwanda, several government ministries and agencies play key roles in environmental management, biodiversity conservation, and sustainable use. These institutions work together to implement policies and programs that ensure the protection of natural resources and the promotion of sustainable development.

The following summary provides the main governmental institutions that are involved in environmental management and biodiversity conservation, highlighting their roles and responsibilities. The Ministry of Environment (MoE), Rwanda Environment Management Authority (REMA), Rwanda Development Board (RDB) through its Tourism and Conservation Department, Rwanda Forestry Authority (RFA), Rwanda Green Fund (RGF), and Rwanda Water Resources Board (RWB) are the leading institutions with legal mandates of protecting the overall environment and the biodiversity in Rwanda. Environment and climate change have been considered as crosscutting issues to be mainstreamed by other ministries, agencies and districts in their plans and budgets.

**The Ministry of Environment (MoE)** is the central government body responsible for formulating and coordinating policies and strategies for environmental protection, biodiversity conservation, and sustainable use of natural resources in Rwanda.



The ministry has the mandate of ensuring the protection and conservation of the environment and promoting optimal and rational utilisation of natural resources for sustainable development. Among its assignments is the formulation of relevant policies and laws regulating the protection of the environment. Furthermore, it plays a critical role in overseeing the development and implementation of Rwanda's national strategies, such as the National Biodiversity Strategy and Action Plan (NBSAP), aimed at meeting international biodiversity targets (MoE, 2019).

**Rwanda Environment Management Authority (REMA)** is the regulatory agency for the environment. REMA is tasked with enforcing environmental regulations and ensuring compliance with environmental laws. REMA is responsible for coordinating, monitoring and evaluating environmental impact assessments, environmental audits, strategic environmental assessments and other environmental studies, managing biodiversity conservation programs, monitoring and overseeing pollution control, and managing projects aimed at ecosystem restoration, including wetland rehabilitation and reforestation.

REMA is also responsible for Rwanda's environmental reporting obligations under international conventions, such as the Convention on Biological Diversity (CBD), including the development and implementation of National Biodiversity Strategy and Action Plans that align with the Kunming-Montreal Global Biodiversity Framework. REMA is a designated institution that hosts the focal points for the Convention on Biological Diversity (CBD), the Convention on Migratory Species (CMS), the Nagoya Protocol, and the Ramsar Convention. Also, REMA has a unit for advocacy and multilateral environmental agreement monitoring, and this unit has a mandate to coordinate the implementation of all MEAs ratified by Rwanda.

REMA has adopted several Community-Driven Development (CDD) approaches to support communities in improving their livelihoods while actively participating in environmental protection. These approaches, focusing on empowering local communities to become stewards of their environment while fostering socio-economic development, include:

**INTEGRATED WATERSHED MANAGEMENT**

**IMPLEMENTING THE GREEN VILLAGES MODEL**

**PROMOTING PAYMENT FOR ECOSYSTEM SERVICES (PES)**

**LIVELIHOOD IMPROVEMENT THROUGH NATURE-BASED SOLUTIONS**

COMMUNITY AWARENESS AND CAPACITY BUILDING

SUSTAINABLE WETLAND MANAGEMENT

COMMUNITY-BASED MONITORING, AND REPORTING

PROMOTING COOPERATIVES AND SAVINGS GROUPS

ECOSYSTEM-BASED ADAPTATION (EBA)

Through these integrated and participatory approaches, REMA demonstrates how community-driven initiatives can effectively link environmental protection with socio-economic development in Rwanda. The positive impacts of these actions include improved livelihoods through sustainable practices, restoration and conservation of critical ecosystems, including forests, wetlands, and watersheds, enhanced community ownership and participation in environmental management, and greater resilience to climate change impacts.

REMA also plays a crucial role in enforcing environmental laws. REMA's Environmental Compliance and Enforcement Division ensures that environmental degradation is prevented, and remedial measures are proposed where degradation occurs. This division coordinates activities related to the formulation and enforcement of environmental regulations, conducts environmental audits and inspections, and ensures regulatory compliance.

**Rwanda Forestry Authority (RFA)** is mandated to manage Rwanda's forest resources, which are vital for biodiversity conservation. The RFA oversees forest conservation, reforestation, afforestation, and the sustainable management of forest ecosystems. Given that forests are critical habitats for wildlife and important carbon sinks, the RFA's work contributes to both biodiversity conservation and climate change mitigation. Forests in Rwanda serve as habitats for various species and play a crucial role in maintaining ecosystem services.

**Rwanda Development Board (RDB)**, particularly through its Department of Tourism and Conservation, is responsible for managing Rwanda's national parks, which are critical for biodiversity conservation. These include Volcanoes National Park, Nyungwe National Park, Akagera National Park and Gishwati-Mukura National Park. RDB focuses on integrating conservation efforts with ecotourism, ensuring that tourism revenues support both biodiversity conservation and local community development.



One of RDB's successes has been the mountain gorilla conservation program, which has helped increase the population of this critically endangered species (RDB, 2020), and the reintroduction of lions and rhinos in the Akagera National Park. RDB conducts research and innovations and enhances and sustains the ecological integrity, wealth and productivity of national parks as pillars of environmental stewardship and sustainable development.

**The Ministry of Agriculture and Animal Resources (MINAGRI)** plays an indirect but important role in biodiversity conservation through its mandate to ensure sustainable agricultural development. The National Agriculture Policy of Rwanda (2018) has given attention to sustainable agricultural practices. Through this national policy, the government will follow a landscape approach to land restoration to restore the productivity of degraded landscapes. Some of the identified action plans include: (i) rehabilitate degraded land by using a combination of natural and protective forests, (ii) improve the management of existing woodlots and (iii) stimulate the adoption of agroforestry (MINAGRI, 2017).

**Rwanda Agriculture and Animal Resources Development Board (RAB):** The mission of RAB is to develop agriculture and animal resources through research, agricultural extension and animal resources extension to increase agricultural and animal resources productivity and quality, as well as their derived products (RAB, 2024). The Board is mandated with promoting sustainable agricultural practices and conserving agricultural biodiversity. RAB works to enhance food security while minimising environmental degradation through soil conservation, agroforestry, and sustainable land use management practices. RAB is also involved in the conservation of genetic resources, ensuring the preservation of indigenous crop and livestock varieties (RAB, 2019).

**Local administration:** Concerning biodiversity conservation, local government supervises several technical and administrative activities which include (i) mobilising community members to participate in project activities, (ii) participating in the consultations leading to the formulation of protected areas' management plans, (iii) planning for and integrating conservation activities in the District Development Plans (DDPs) & Annual Performance Contracts (Imihigo), (iv) mobilising resources for DDPs implementation, (v) supporting community development activities in their districts, etc.

The Law on Environment of 2018 states the obligation of decentralised entities to ensure the implementation of laws, policies, strategies, objectives and programmes relating to the protection, conservation and promotion of the environment in Rwanda. Rwanda Water Resources Board (RWB).

**The Rwanda Water Resources Board (RWB)** is responsible for the management and protection of water resources, including wetlands and watersheds, which are critical for biodiversity. RWB's role in conserving aquatic ecosystems is essential for maintaining biodiversity in freshwater habitats. RWB plays a crucial role in the conservation of wetlands, which are vital for biodiversity and ecosystem services.

The strategic objectives of RWB for the period up to 2030 include strengthening water resources governance, reducing and controlling soil erosion, enhancing water availability (quantity and quality), and improving the capacity of the board. These strategic directions have a direct bearing on biodiversity and ecosystem integrity.

**Rwanda Green Fund (RGF):** The RGF, established in 2012, is a national environment and climate finance facility mandated to mobilise and manage resources for projects that protect the environment and build climate resilience. Its investment strategy targets high-impact public and private initiatives that align with Rwanda's transition to a green economy, including biodiversity conservation, ecosystem restoration, and climate-smart agriculture. Notably, in 2021, FONERWA supported a project to map and domesticate edible mushroom species in Nyungwe and volcanoes forests, contributing to sustainable livelihoods and conservation of fungal biodiversity.

Over the past decade, the Fund has raised over USD 274 million and financed 46 transformative projects planting more than 46,000 ha of forests and agroforestry, protecting watersheds, creating green jobs, and restoring degraded ecosystems. Through grants, innovation investments, and affordable credit lines, the Rwanda Green Fund continues to catalyse biodiversity-enhancing initiatives and strengthen the country's resilience to climate change.

### 5.5.2 Higher Learning and Research Institutions

University of Rwanda (UR): Two colleges of the University of Rwanda are directly dealing with biodiversity and agro-biodiversity: College of Agriculture and Veterinary Medicine (CAVM) and College of Science and Technology (CST). The university provides professional skills to suit the national, regional, and global context, encompassing biodiversity management programs. CAVM offers an undergraduate program in Soil Science and Environmental Management with commonalities in soil fertility and watershed management. CST provides a master's degree in Biodiversity Conservation and Natural Resources Management. Other higher learning institutions deliver courses and training related to biodiversity and environmental conservation.

The Center of Excellence on Biodiversity and Natural Resources Management (CoEB) is a vital centre of the university, tasked with undertaking scientific research to continuously monitor, create new knowledge, as well as generate innovative solutions in biodiversity. There are also other higher learning institutions in Rwanda, both public and private, that support research and development in biodiversity. These institutions provide training for higher and mid-career professionals working in biodiversity, environmental management, forestry, and natural resource management.

Rwanda hosts several public and private institutions that play critical roles in research and development, particularly in biodiversity, environmental management, forestry, and natural resource management. Some notable examples include:



- **African Leadership University (ALU):** ALU, through its School of Wildlife Conservation, supports research, training, and leadership development in conservation and biodiversity management.
- **Rwanda Institute for Conservation Agriculture (RICA):** RICA emphasises sustainable agricultural practices, natural resource conservation, and ecosystem restoration.
- **University of Lay Adventists of Kigali (UNILAK)** has a department of Environmental Management and Conservation in order to contribute to sustainable solutions for addressing the complexity of modern environmental issues in Rwanda and in the region, and ensure that they respond to the needs and interests of the community.

### 5.5.3 International and National Non-Government Organisations (NGOs)

NGOs play a crucial role in complementing Rwanda's efforts to conserve biodiversity and promote sustainable natural resource use. These organisations are instrumental in protecting endangered species, restoring ecosystems, and engaging local communities. Through their collaborative projects, research, and advocacy, these NGOs help ensure that Rwanda's rich biodiversity is conserved for future generations.

Some of the key NGOs involved in biodiversity conservation in Rwanda include the International Union for Conservation of Nature (IUCN), Wildlife Conservation Society (WCS), International Gorillas Conservation Program (IGCP), Dian Fossey Gorilla Fund International (DFGFI), Albertine Rift Conservation Society (ARCOS), African Parks (AP), BirdLife International, The Nature Conservancy (TNC), Association Rwandaise des Ecologistes (ARECO), Rwanda Environmental Conservation Organization (RECOR), Partners for Conservation, Rwanda Wildlife Conservation Association (RWCA), Nature Rwanda (NR), Gesellschaft für Internationale Zusammenarbeit (GIZ), World Resources Institute (WRI), Greater Virunga Transboundary Corroboration (GVTC), African Wildlife Foundation (AWF), Wild Earth Allies (WEA), Gorilla Doctors (GD), Conservation Heritage Turambe (CHT), Rwanda Biodiversity Youth Network (RBYN), among others.

### 5.5.4 Community-Based Organisations (CBOs)

Community-Based Organisations (CBOs) in Rwanda play a vital role in promoting conservation and the sustainable use of biodiversity by engaging local communities in environmental protection and natural resource management. These organisations often work at the grassroots level, empowering communities to adopt sustainable practices while improving their livelihoods.

These local community-based organisations are involved in biodiversity conservation programs and undertake several activities such as: (i) field implementation of project activities as sub-contractors to the implementing partners and (ii) capacity building for community members.

Some of the examples of CBOs that actively involve local communities in biodiversity conservation and building capacity among community members include Biodiversity Conservation Organisation (BIOCOOR), Sabyinyo Community Livelihood Association (SACOLA), Rwanda Youth Biodiversity Network (RYBN), and Greater Virunga Landscape Youth Constituency, among others.

### 5.5.5 Local Communities

Local communities in Rwanda are actively involved in biodiversity conservation programs and projects, playing a critical role in protecting ecosystems while improving their livelihoods. Community engagement in biodiversity conservation is central to Rwanda's approach, ensuring that local populations benefit from conservation efforts and are empowered to take an active role in protecting natural resources. The following are some of the initiatives that demonstrate how local communities are involved:

**Community-Based Conservation (CBC) Initiatives:** Many biodiversity conservation programs in Rwanda adopt a community-based conservation (CBC) approach, where local communities are directly involved in managing and conserving natural resources. Programs like those in Volcanoes National Park and Nyungwe National Park engage communities in protecting biodiversity through ecotourism, wildlife monitoring, and habitat restoration efforts. By involving the community, these programs ensure that conservation is locally relevant and sustainable.

**Eco-tourism and Sustainable Livelihoods:** Eco-tourism is one of the major ways local communities are involved in biodiversity conservation. In areas like Volcanoes National Park and Akagera National Park, residents are trained as park guides, porters, and hospitality workers, creating employment opportunities linked to conservation. This provides an economic incentive for communities to protect wildlife, such as the endangered mountain gorillas, and maintain healthy ecosystems that attract tourists. Revenue-sharing schemes, like those in Volcanoes National Park, direct a portion of tourism income back to local communities for development projects, further reinforcing the link between conservation and economic well-being.

**Participatory Forest Management:** Rwanda's forest conservation programs, especially in areas like Gishwati-Mukura National Park, actively involve local communities in reforestation and forest management projects. Community members participate in tree planting, agroforestry, and sustainable land-use practices that restore degraded lands and prevent deforestation. Through co-management agreements, communities are given responsibilities to protect and sustainably manage forest resources while benefiting from non-timber forest products, such as fruits and medicinal plants.

**Wetland Restoration and Protection:** In the Eastern Province and other regions, communities are engaged in the protection and restoration of wetlands, which are critical for biodiversity. Local cooperatives work with REMA to implement sustainable agricultural practices that minimise land degradation and protect water bodies from pollution.



These community-led initiatives help conserve wetland ecosystems that provide habitat for various species while supporting livelihoods through sustainable agriculture and fishing.

**Agroforestry and Sustainable Agriculture:** Local communities are also involved in promoting agroforestry and sustainable agricultural practices, which contribute to biodiversity conservation by reducing the pressure on natural ecosystems. Organisations like the Rwanda Agriculture and Animal Resources Development Board (RAB) work with farmers to adopt sustainable farming techniques, such as intercropping, organic farming, and soil conservation practices. These techniques not only improve agricultural productivity but also help conserve soil biodiversity, water resources, and forest ecosystems.

**Umuganda** or community works can be translated as “coming together in common purpose to achieve an outcome” (Rwanda Governance Board, 2017). Through Umuganda, community members contribute not only to the building of their country but also to cleanliness and conservation.

### 5.5.6. Religious and Faith Organisations

They play a significant role in environmental protection, leveraging their influence and community reach to promote conservation and sustainability. By aligning environmental stewardship with spiritual values, these organisations encourage communities and schools to actively participate in protecting natural resources, combating climate change, and restoring ecosystems. Key Activities by religious organisations in environmental protection include tree planting campaigns; awareness and education, promoting eco-friendly practices, and community mobilisation.

A key successful example is the “Green Rwanda Initiative” led by the Rwanda Religious Leaders Forum (RRLF), which promotes environmental conservation and climate resilience.

### 5.5.7 Private Sector

Private sector engagement in biodiversity conservation and sustainable use in Rwanda is increasingly recognised as a vital component in preserving the country’s rich natural resources. Businesses, particularly in tourism, agriculture, and natural resource management, are contributing to conservation efforts while integrating sustainability into their operations. Examples of private sector engagements in biodiversity conservation and use include:

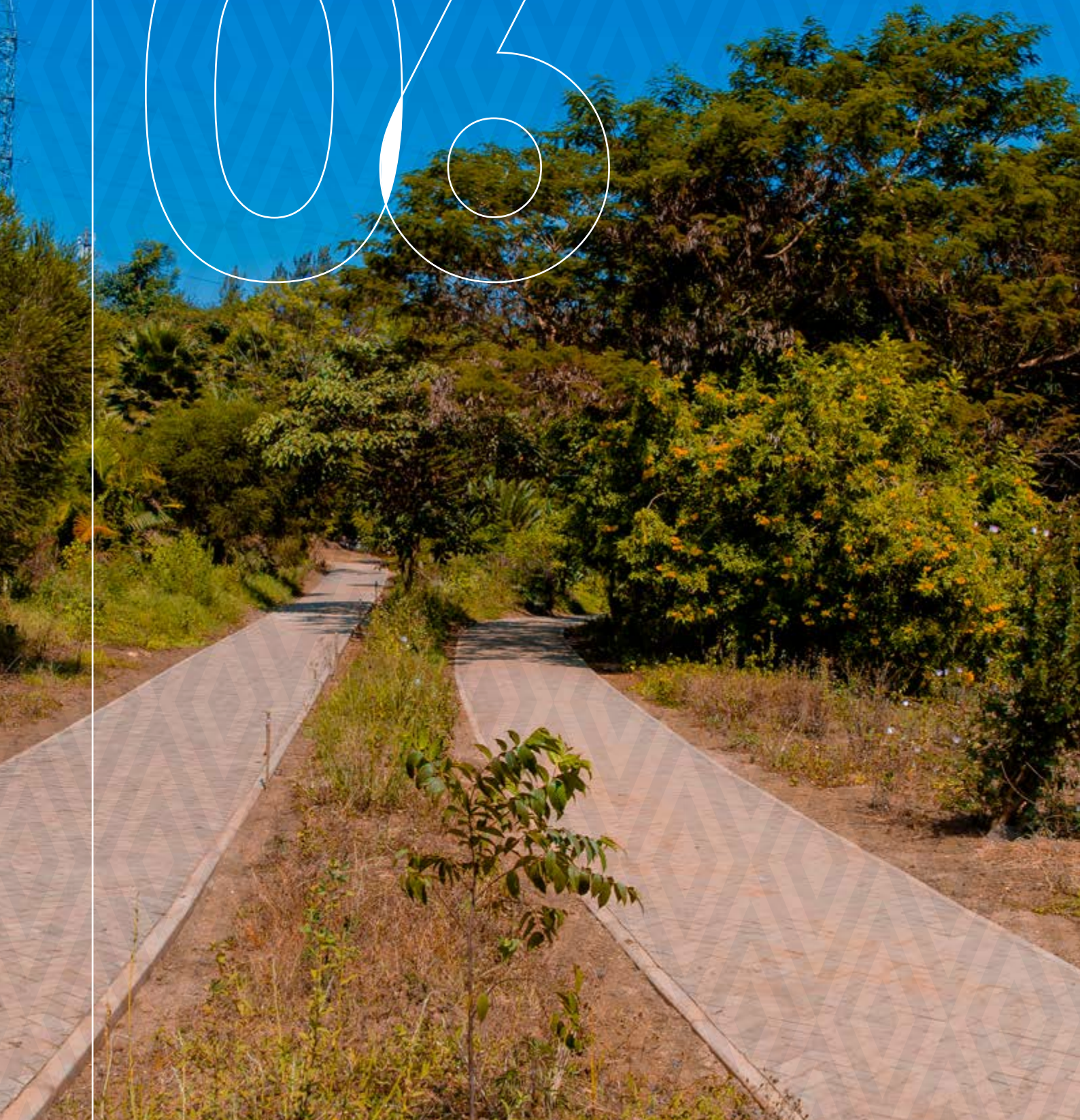
1. **Eco-tourism and Wildlife Conservation:** The eco-tourism sector plays a prominent role in biodiversity conservation in Rwanda, particularly in the protection of iconic species and ecosystems.

Private companies such as Wilderness Safaris, which operates in Akagera National Park, have partnered with the Rwanda Development Board (RDB) and conservation NGOs to protect wildlife, restore habitats, and promote sustainable tourism. For instance, in collaboration with African Parks, private tourism investments have helped fund anti-poaching efforts, reintroduction programs, and conservation infrastructure, resulting in significant successes such as the return of lions and rhinos to Akagera National Park. In Volcanoes National Park, private sector investments in luxury lodges and ecotourism initiatives are directly tied to gorilla conservation efforts. The revenues generated from gorilla trekking permits are shared with the local communities and used for conservation programs.

- 2. Sustainable Agriculture and Agroforestry:** The private agricultural sector is increasingly focusing on sustainable farming practices to ensure the protection of biodiversity. Agribusinesses such as Sustainable Harvest Rwanda and Rwanda Mountain Tea are promoting agroforestry, organic farming, and sustainable land-use practices that reduce deforestation, improve soil fertility, and conserve water resources. These businesses work closely with farmers to adopt techniques such as intercropping and planting indigenous trees, which benefit both agricultural productivity and biodiversity.
- 3. Private Sector in Reforestation Initiatives:** Private companies also play a key role in reforestation and afforestation initiatives. For instance, the Rwanda Wood Industry Corporation has partnered with the government and local communities to plant trees in degraded areas, particularly around protected forests like Gishwati-Mukura National Park. These efforts also create economic opportunities for local populations, further linking biodiversity conservation with sustainable livelihoods.

For example, the Rwanda Tea Initiative promotes sustainable tea production in regions like Nyungwe Forest, reducing the pressure on critical ecosystems while enhancing farmers' income through eco-friendly practices. This shift toward sustainability aligns with the country's green growth strategy, aimed at reducing land degradation and ensuring long-term agricultural resilience.

06



## 6. 2016-2020 NBSAP ACHIEVEMENTS AND IMPLEMENTATION GAPS

### 6.1 OVERVIEW

Between 2016 and 2020, global biodiversity conservation efforts were significantly influenced by the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets, which set out a roadmap for achieving global conservation goals. According to the guidance from the Convention on Biological Diversity (CBD) Secretariat, national biodiversity strategies and action plans (NBSAPs) are the main vehicle for the implementation of the Convention on Biological Diversity at the national level and they are expected to be a key component of the enhanced planning, monitoring, reporting, and review mechanism of the Convention for the Kunming-Montreal global biodiversity framework (CBD, 2022).

Rwanda developed and implemented the 2016-2020 National Biodiversity Strategy and Action Plan (NBSAP) that has the following long-term vision: "By 2040, national biodiversity will be restored and conserved, contributing to economic prosperity and human well-being through delivering benefits essential for Rwandan society in general."

The 2016-2020 NBSAP was developed to address the main causes of national biodiversity loss by mainstreaming biodiversity conservation in the decision-making process across all governmental, private and civil society's development programs, to reduce anthropogenic pressures on biodiversity resources and promote their sustainable use, to improve the status of national biodiversity by expanding and safeguarding priority protected ecosystems and maintaining biological communities in equilibrium state and to ensure equitable sharing of benefits arising from the use of biodiversity and ecosystem services.

An assessment of the achievements and implementation gaps was conducted against the objectives of the 2016-2020 NBSAP in line with the Aichi Biodiversity Targets. The achievement covered under this updated NBSAP covers the period of the existing NBSAP from 2016 to 2020 until 2024.



According to Rwanda's 6th National Report to CBD (REMA, 2020), out of the 19 national targets, 1 target was on track to exceed the target, 12 targets were on track to achieve the target, and 6 targets showed progress but at an insufficient rate.

It was noted that targets and activities related to pollution, invasive alien species, Genetically Modified Organisms (GMOs), values of traditional knowledge, cultural heritage and practices and their customary use of biological resources knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and mobilisation of financial resources need continued coordinated efforts and should be considered among priority areas of action in the next planning and implementation of the National Biodiversity Strategy and Action Plan.

Between 2020 and 2025, Rwanda has made significant strides in biodiversity and wetlands management aligned with its National Biodiversity Strategy and Action Plan (NBSAP). One of the hallmark achievements is the transformation of degraded wetlands into eco-tourism hubs, notably the Nyandungu Urban Wetland Eco-Park, which now attracts thousands of visitors and supports over 4,000 green jobs. Additionally, the restoration of five major wetlands in Kigali and Rugezi Wetland has contributed to biodiversity recovery and enhanced climate resilience.

In forest and landscape restoration, projects such as the Gishwati-Mukura reforestation and the Nyungwe-Ruhango Corridor initiative have led to the planting of thousands of indigenous trees and the restoration of over 2,000 hectares of land. These efforts are complemented by substantial job creation and ecosystem service recovery.

On the policy and institutional front, Rwanda has revised its Environmental Impact Assessment (EIA) guidelines to include biodiversity considerations and launched the Kigali Wetland Master Plan to safeguard over 9,000 hectares of wetland. Financial mechanisms were also improved through enhanced allocation of environmental fees to the national climate and environment fund (FONERWA). Collectively, these actions reflect Rwanda's commitment to restoring degraded ecosystems, integrating biodiversity into national planning frameworks, and fostering sustainable livelihoods. These interventions support the NBSAP goals of enhanced conservation governance, ecosystem integrity, and inclusive environmental decision-making.

## **6.2 STRENGTHS OF THE 2016-2020 NBSAP**

### **COMPREHENSIVE FRAMEWORK**

The NBSAP provided a detailed and comprehensive framework for biodiversity conservation, addressing various aspects such as habitat protection, species conservation, sustainable use of resources, and community involvement.

### **ALIGNMENT WITH INTERNATIONAL GOALS**

The strategy aligned with international biodiversity targets, including the Aichi Biodiversity Targets and the Sustainable Development Goals (SDGs), ensuring Rwanda's efforts contribute to global biodiversity conservation.

### **STAKEHOLDER INVOLVEMENT**

The NBSAP emphasised the importance of involving multiple stakeholders, including government agencies, NGOs, local communities, and the private sector, in biodiversity conservation efforts.

### **FOCUS ON ECOSYSTEM SERVICES**

The plan acknowledged the critical role of ecosystem services in supporting the livelihoods of local communities and the national economy, promoting sustainable use and management practices.

## **6.3 OVERALL KEY ACHIEVEMENTS AT THE NATIONAL LEVEL**

Review of the implementation status of the 2016–2020 NBSAP showed improved conservation of biodiversity in Rwanda, including the regeneration of threatened species and best practices for pollinators, and restoration of degraded forests with indigenous species and the establishment of ecological corridors such as the Gazetting Gishwati-Mukura National Park (Santos et al., 2023).

Some of the significant achievements include the following:

### **6.3.1 Enhanced Management of Protected Areas**

Rwanda made significant strides in expanding and managing protected areas. The Akagera National Park and Volcanoes National Park saw improvements in both infrastructure and biodiversity monitoring, leading to increased wildlife populations and tourist visits. According to the Rwanda Development Board (RDB, 2020), significant progress was made in expanding and effectively managing protected areas that have resulted in the reintroduction of lions and rhinoceroses in Akagera National Park and the effective conservation of mountain gorillas in Volcanoes National Park. The Volcanoes National Park, Akagera National Park, and Nyungwe National Park received increased investment in management and anti-poaching efforts.

During this period, Gishwati-Mukura National Park (GMNP) was operationalised and accepted as a United Nations Educational, Scientific and Cultural Organisation (UNESCO) Biosphere Reserve in 2020, and the rehabilitation of the Gishwati-Mukura landscape and the creation of the national park were made possible under the Landscape Approach to Forest Restoration and Conservation (LAFREC) Project (REMA, 2020).



The recognition of Gishwati-Mukura National Park as a UNESCO Biosphere Reserve in 2020 underscored the global significance of Rwanda's restoration efforts. This success not only enhanced biodiversity but also provided sustainable livelihood opportunities for nearby communities through ecotourism and agroforestry programs (UNESCO, 2020).

The increased coverage of protected areas has contributed to improved conservation of critical ecosystems and species such as the mountain gorilla. During this implementation period, the population of the endangered mountain gorilla has increased in Volcanoes National Park, as well as protecting remnant nature.

### **6.3.2 Strengthened Community Engagement and Benefit Sharing**

Several community-based conservation programs were initiated, focusing on involving local communities in biodiversity management. Programs like the "One Cow per Poor Family" (Girinka) have not only improved livelihoods but also promoted sustainable land use practices. Rwanda Environment Management Authority reported that initiatives such as community conservation programs and eco-tourism projects provided local communities with incentives to participate in biodiversity conservation (REMA, 2018).

### **6.3.3 Restoration of Degraded Forest Landscapes and Wetlands**

In 2020, forest cover in Rwanda was 724,695 ha (30.4%), demonstrating the fact that Rwanda has fully achieved one of its Vision 2020 targets of increasing forest cover to 30% of its total land area (REMA, 2020). Rwanda's commitment to the Bonn Challenge, a global effort to restore degraded forests, also yielded impressive results.

By 2020, Rwanda had restored over 700,000 hectares of degraded land through reforestation initiatives and agroforestry practices (AFR100). This restoration effort targeted critical ecosystems such as the Nyungwe National Park and Volcanoes National Park, which serve as vital habitats for biodiversity and as sources of ecosystem services such as carbon sequestration, water regulation, and soil fertility improvement (MoE, 2020). According to REMA (2019), the Gishwati-Mukura landscape restoration and the rehabilitation of Rugezi wetland are key examples of successful ecosystem restoration activities during the implementation period of the NBSAP 2016-2020.

The Gishwati-Mukura National Park area, heavily degraded due to deforestation, overgrazing, and agricultural expansion, was restored through intensive efforts that included planting indigenous tree species, restoring natural habitats, and creating conservation programs for local communities. Similarly, restoration of the Nyabarongo and Rweru-Mugesera wetland areas was another major achievement during the NBSAP implementation period. These restoration programs improved water quality, enhanced biodiversity, and restored critical ecosystem services such as flood regulation and habitat provision for bird species.

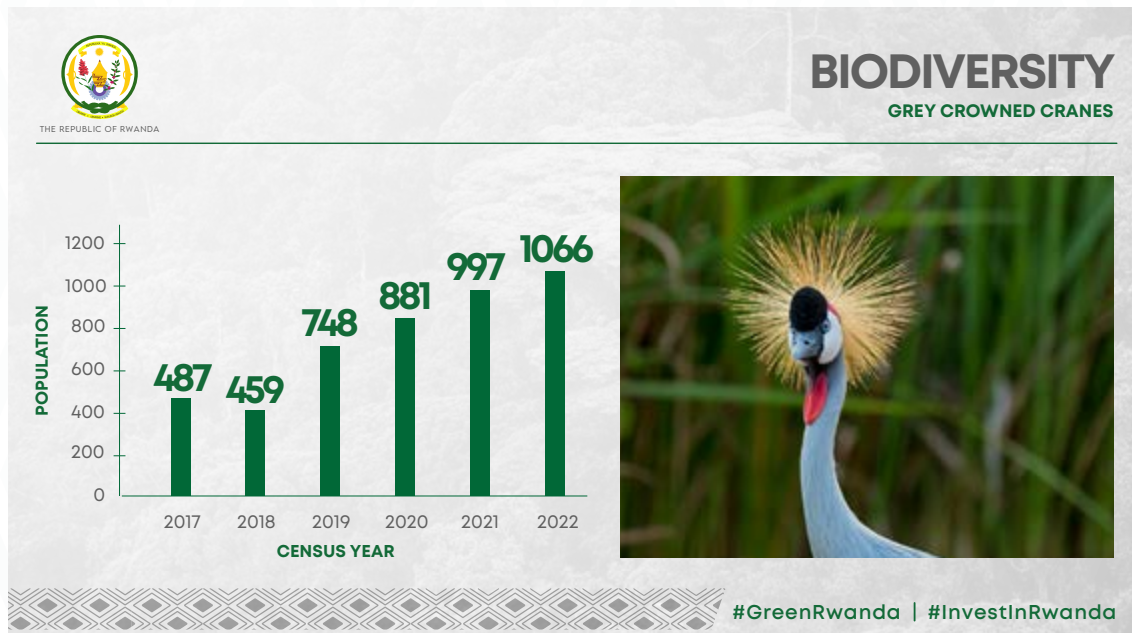
The restoration of Nyandungu Urban Wetland and creation of Nyandungu Eco-Park and continued restoration of other urban wetlands in Kigali including 5 wetlands, namely Nyabugogo, Gikondo, Kibumba, Rugenge-Rwintare, and Rwampara.

### 6.3.4 Successful Restoration of Biodiversity Resources

During the implementation of the 2016–2020 National Biodiversity Strategy and Action Plan (NBSAP), Rwanda made significant strides in restoring biodiversity resources. For example, the annual report of the Rwanda Development Board (2020) showed that 166 Grey Crowned Cranes have been restored back into the wild, while 51 have been transferred to the Umusambi Village sanctuary. The crane population in Rwanda is highly influenced by the status of wetlands in which they thrive. The population of grey-crowned cranes has increased from 487 in 2017 to 1066 in 2022 following various national initiatives for wetland restoration.

The continued increase in the population of mountain gorillas, the reintroduction of 23 black rhinos and 11 lions into Akagera National Park after a 10-year absence, and the tremendous increase in populations of other species, such as eastern chimpanzees and golden monkeys are some of the key achievements during the implementation period of the 2016–2020 NBSAP (REMA, 2020).

**Figure 9: Increase in grey crowned cranes population, Rwanda (2017-2022) (MoE, 2022)**





### 6.3.5 Policy and Legal Frameworks

Rwanda's commitment to biodiversity conservation is evident in its comprehensive legal framework, enforcement mechanisms, and innovative financing strategies. The integration of biodiversity goals into national policies, coupled with effective enforcement by REMA and strategic financing initiatives like FONERWA, positions Rwanda as a leader in sustainable development and environmental stewardship.

The adoption of the National Environment and Climate Change Policy and the establishment of the Rwanda Green Fund (RGF) are key milestones in this journey (GoR, 2017). The revised National Environment and Climate Change Policy of 2019 integrates biodiversity conservation into broader environmental and climate action agendas. It emphasises ecosystem-based adaptation, sustainable land use, and conservation financing mechanisms to protect biodiversity. These initiatives align Rwanda's biodiversity goals with national development plans, such as Vision 2050.

Rwanda has enacted several laws and ministerial orders to protect its rich biodiversity. Law No. 64 of 2021 governs biological diversity, providing a comprehensive legal basis for the conservation and sustainable use of biodiversity. Currently, the biodiversity policy of 2011 and the Wildlife Policy of 2013 are under revision and will be combined to have one comprehensive policy. The Ministry of Finance and Economic Planning (MINECOFIN) has developed a climate and nature finance strategy for a period of five years until 2030. This strategy focuses on mobilising financial resources for environmental initiatives and promoting sustainable development. By integrating environmental considerations into economic planning, Rwanda aims to achieve its biodiversity and climate goals while fostering economic growth.

Furthermore, Rwanda has integrated biodiversity conservation into its national development agenda through Vision 2050 (emphasizing sustainable development, climate resilience, and ecosystem restoration), National Strategy for Transformation (prioritizing environmental sustainability and biodiversity conservation as pillars of economic growth), and District Development Strategies (DDSs) (promoting decentralised approaches to biodiversity conservation and natural resource management).

### 6.3.6 Biodiversity Monitoring and Research

Increased investment in biodiversity research and monitoring has significantly enhanced data collection and management in Rwanda. This progress has improved the understanding of species distribution and ecosystem health, facilitating more informed decision-making. Research conducted includes, but is not limited to the following: Management Plan for Invasive Species, Reports Integrated Study of Wastewater Treatment Systems in Rwanda, Economic Valuation of Ecosystem Services (Akagera,

Kigali and Rugezi wetland complexes and forest ecosystems), and a study to establish a National List of Threatened Terrestrial Ecosystems and Species in Need of Protection. Also, it includes mapping of biodiversity hubs and key ecosystem services as a tool for shaping optimal areas for conservation (2021). The Rwanda Wetland Biodiversity Status Report by the Albertine Rift Conservation Society (ARCOS) provides an in-depth evaluation of wetland biodiversity in Rwanda. This report identifies data gaps and highlights future research priorities, contributing to better data collection and management. REMA, through its projects, has supported students in higher learning institutions to conduct their academic research for both master's and bachelor's degrees. Additionally, the establishment of a National List of Threatened Terrestrial Ecosystems and Species in Need of Protection has been instrumental in identifying and prioritising conservation efforts for vulnerable species and habitats (REMA, 2020).

These research initiatives have been supported by the Rwanda Environment Management Authority (REMA), which emphasises the importance of biodiversity conservation in maintaining ecosystem services such as water regulation, soil erosion control, and climate change mitigation.

Overall, the enhanced data collection and management resulting from increased investment in biodiversity research have been pivotal in advancing Rwanda's conservation strategies and sustainable development goals.

### **6.3.7 Revenue Sharing Scheme**

Rwanda's revenue-sharing scheme is a government initiative aimed at promoting conservation while supporting local communities around national parks. Established in 2005, the program allocates a percentage of tourism revenue, primarily from gorilla trekking permits and other park entry fees back to communities surrounding these protected areas.

In 2024, the Tourism Revenue Sharing Program funded 105 community projects, totalling over RWF 3.27 billion across sectors like agriculture, infrastructure, and equipment (RDB, 2024).

### **6.3.8 Education, Public Awareness and Communication**

Conservation education and awareness programs in Rwanda promote sustainable environmental stewardship by raising understanding of biodiversity and ecosystem protection. Through community outreach, school activities, and partnerships, these programs address human-wildlife conflicts, highlight the value of natural resources, and encourage sustainable practices. They support biodiversity preservation and national park protection.



Akagera National Park's community development strategy deeply engages neighbouring residents through education, outreach, and economic initiatives. Annual events, including sports, environmental film shows, and school competitions, promote conservation awareness among tens of thousands.

The park supports education through eco-clubs, school visits, and reading programs, reaching thousands of students and teachers. Income-generating projects like beekeeping, poultry, and the Gishanda Fish Farm boost local livelihoods while promoting sustainability.

Training and fish restocking efforts further strengthen food security, job creation, and human-wildlife coexistence in the region. The "Talk to a Scientist" event was organised to celebrate International Biodiversity Day 2025 at Nyandungu Eco-Park, followed by a field visit to Umusambi Village. Students from various schools who participated in the school competition also took part in the event. Since 2022, REMA has been implementing an awareness-raising program for fish farmers around Lake Kivu to ensure that fish farming practices are environmentally sustainable, comply with existing environmental regulations, and contribute to the protection of the lake's ecosystem.

Umusambi Village in Kigali, managed by the Rwanda Wildlife Conservation Association (RWCA), runs a dynamic environmental education program that raises awareness and promotes conservation among Rwandan communities, especially focusing on the protection of threatened species like the Grey Crowned Crane. Through guided tours, interactive sessions, and outreach activities, the program engages school children, educators, and the public in learning about biodiversity, ecosystems, and sustainable practices. Aligned with the national curriculum, it empowers youth and teachers as key change agents through tailored learning and training opportunities.

The Albertine Rift Conservation Society (ARCOS) implements a robust environmental education and awareness programme aimed at fostering a culture of conservation and sustainable natural resource management. This program targets schools, local communities, and decision-makers, promoting knowledge and attitudes that support biodiversity conservation and ecosystem health. Through school environmental clubs, community outreach, training workshops, and public awareness, Nature Rwanda, together with Save the Children, has engaged children in planting trees and completing eco-spaces around schools.

### **6.3.9 Youth Engagement in Conservation**

Youth engagement in conservation in Rwanda plays a pivotal role in safeguarding the country's rich biodiversity and natural heritage. Through various initiatives, young people are actively involved in environmental education, reforestation projects, wildlife protection, and sustainable development programs. Schools and universities incorporate conservation topics into their curricula, while youth groups and organisations participate in hands-on activities such as tree planting, waste management, and community awareness campaigns.

National parks and conservation agencies also offer internships, training, and volunteering opportunities to equip young people with the skills and knowledge needed to champion environmental protection. By fostering a sense of responsibility and leadership among the youth, Rwanda is building a generation committed to conservation and sustainability.

A successful example of youth engagement in conservation in Rwanda is the involvement of young people in the restoration and protection of Gishwati-Mukura National Park, a UNESCO Biosphere Reserve. Youth groups and student-led organisations have participated in reforestation programs, planting native tree species to restore degraded areas of the park. They have also engaged in biodiversity monitoring, waste management initiatives, and community outreach to promote conservation awareness among local populations.

Programs like the “Forest of Hope” initiative have empowered youth to lead environmental education campaigns in schools and communities, spreading knowledge about the importance of biodiversity and sustainable land use. Additionally, collaborations between conservation organisations, such as ARCOS, and local youth groups have provided capacity-building workshops and training in eco-friendly practices, equipping young people with skills to contribute to long-term conservation efforts. There is currently the Rwanda Biodiversity Youth Network.

### **6.3.10 Technology Transfer and Information Sharing**

Engagement in technology transfer and information sharing in conservation in Rwanda has significantly enhanced the country's ability to protect and restore its biodiversity. Through collaborations with international organisations, government agencies, and local institutions, Rwanda has embraced innovative technologies to address conservation challenges. Tools like GIS mapping, remote sensing, and wildlife monitoring systems have been employed to track animal movements, detect habitat changes, and mitigate human-wildlife conflicts.

Programs like IUCN's Tech4Nature initiative, in collaboration with Huawei, have introduced cutting-edge digital solutions to improve data collection and decision-making in protected areas. Additionally, conservation projects often prioritise capacity-building and knowledge exchange by training park rangers, researchers, and local communities on the use of these technologies. IremboPay, which is an electronic payment system connected to the Irembo platform, was launched for the collection of environmental fees and fines.

Information-sharing platforms and workshops further promote collaboration among stakeholders, ensuring that best practices, research findings, and innovations are widely disseminated. This approach has strengthened Rwanda's conservation efforts, improved ecosystem management, and fostered partnerships that contribute to global biodiversity goals. A successful example of technology transfer in conservation in Rwanda is the Rwanda Biodiversity Information System (RBIS).



Developed as a collaborative platform, RBIS has become a critical tool for collecting, managing, and sharing biodiversity data across the country. By integrating advanced technology and local expertise, the system enables stakeholders, including government institutions, researchers, conservation organisations, and communities to access and utilise accurate and up-to-date information on Rwanda's biodiversity.

RBIS supports conservation efforts by providing data on species distribution, habitat changes, and environmental threats, which informs decision-making and policy development. The system has also enhanced transparency and collaboration by allowing stakeholders to contribute and share their findings, fostering a culture of knowledge exchange.

This has strengthened Rwanda's capacity for ecosystem monitoring, management, and restoration while promoting sustainable development and conservation outcomes.

### 6.3.11 Implementation Status of the Aichi Biodiversity Targets

Rwanda has made significant progress in implementing the Aichi Biodiversity Targets through policy integration, conservation programs, and sustainable resource management initiatives. Key achievements include:

**1**

#### INCREASED AWARENESS

Nationwide campaigns, Biodiversity Day celebrations, and community-based education programs have improved public understanding and participation in biodiversity conservation.

**2**

#### POLICY INTEGRATION

Biodiversity values have been incorporated into Vision 2050 and the National Environment and Climate Change Policy, ensuring cross-sectoral alignment.

**3**

#### SUSTAINABLE INCENTIVES & PRACTICES

Rwanda introduced eco-certification, sustainable agriculture incentives, agroforestry, and organic farming, supporting nature-friendly production systems.

**4**

#### FOREST & ECOSYSTEM RESTORATION

Programs like the Gishwati-Mukura Landscape Restoration have increased forest cover and rehabilitated degraded landscapes.

**5****PROTECTED AREAS & SPECIES CONSERVATION**

Expansion of protected areas and focused conservation efforts have stabilised endangered species populations, including the mountain gorilla.

**6****POLLUTION CONTROL**

Regulations on waste management and industrial discharges have led to reductions in water and air pollution in key areas.

**7****ECOSYSTEM RESILIENCE & CLIMATE ADAPTATION**

Ecosystem-based adaptation measures have improved ecosystem resilience to climate change.

**8****FINANCIAL RESOURCE MOBILISATION**

Rwanda has secured funding from international cooperation and national budgets to support biodiversity initiatives.



Implementation status of the Aichi targets is summarised in Table 1 below.

**Table 1: Aichi Biodiversity Targets and Implementation Status, Rwanda**

TARGET	IMPLEMENTATION STATUS	ACHIEVEMENTS	GAPS
<b>1. Awareness of Biodiversity Increased</b>	Awareness campaigns, educational programs, and media outreach efforts have significantly increased public awareness of biodiversity issues. Initiatives such as the Biodiversity Day celebrations and community-based education programs have been effective.	Increased public participation in conservation activities and improved knowledge about biodiversity importance.	Limited reach in remote areas and need for continuous engagement.
<b>2. Biodiversity Values Integrated</b>	Biodiversity values have been integrated into national development policies, including Vision 2050 and the National Environment and Climate Change Policy.	Enhanced policy coherence and cross-sectoral integration.	Implementation at local government levels needs strengthening.
<b>3. Incentives Reformed</b>	Efforts to reform harmful subsidies and promote incentives for sustainable practices are ongoing.	Introduction of eco-certification and sustainable agriculture incentives.	Slow policy changes and insufficient financial mechanisms
<b>4. Sustainable Production and Consumption</b>	Promotion of sustainable agricultural and forestry practices has been initiated, focusing on reducing environmental impacts.	Adoption of agroforestry and organic farming practices.	Limited scale of implementation and need for more robust monitoring.
<b>5. Habitat Loss Halved or Reduced</b>	Efforts to reduce habitat loss include reforestation and landscape restoration projects like the Gishwati-Mukura Landscape Restoration.	Increase in forest cover and restoration of degraded ecosystems.	Continued threat from agricultural expansion and urban development.
<b>6. Sustainable Management of Marine Living Resources</b>	As a landlocked country, Rwanda focuses on freshwater ecosystems. Efforts include sustainable fishing practices in lakes.	Improved fish stock management in major lakes.	Monitoring and enforcement need enhancement.

TARGET	IMPLEMENTATION STATUS	ACHIEVEMENTS	GAPS
<b>7. Sustainable Agriculture, Aquaculture, and Forestry</b>	Implementation of sustainable land use practices, promotion of agroforestry, and conservation agriculture.	Increased adoption of sustainable practices by farmers.	Limited resources for widespread adoption and capacity building.
<b>8. Pollution Reduced</b>	Programs to reduce pollution include waste management initiatives and regulations on industrial discharges.	Reduction in water and air pollution in key areas.	Enforcement and coverage remain challenges.
<b>9. Invasive Alien Species Prevented and Controlled</b>	Measures to control invasive species include awareness campaigns and mechanical removal programs.	Reduction of certain invasive species in protected areas.	Comprehensive management plans and resources are needed.
<b>10. Pressures on Vulnerable Ecosystems Reduced</b>	Protection of vulnerable ecosystems like wetlands through legislation and community engagement.	Enhanced protection of key wetlands and sensitive areas.	Ongoing pressures from land use changes.
<b>11. Protected Areas Increased and Improved</b>	Expansion of protected areas and improvement of management effectiveness.	Increase in the area of protected lands and better management practices.	Financial and human resource limitations
<b>12. Extinction Prevented</b>	Conservation programs targeting endangered species, such as the mountain gorilla, have been effective.	Stabilisation and recovery of certain endangered species populations.	Continued threats from poaching and habitat loss.
<b>13. Genetic Diversity Maintained</b>	Efforts to conserve genetic diversity include seed banks and the conservation of traditional crop varieties.	Preservation of genetic resources and traditional knowledge.	Limited capacity and resources for broader genetic conservation efforts



TARGET	IMPLEMENTATION STATUS	ACHIEVEMENTS	GAPS
<b>14. Ecosystem Services Restored and Safeguarded</b>	Restoration of ecosystems to enhance services such as water purification and soil fertility.	Improved ecosystem services in restored areas.	Scaling up restoration efforts and monitoring effectiveness.
<b>15. Ecosystem Resilience Enhanced</b>	Initiatives to enhance ecosystem resilience to climate change through ecosystem-based adaptation.	Improved resilience of key ecosystems.	Need for integrated approaches and funding.
<b>16. Nagoya Protocol in Force and Operational</b>	Implementation of the Nagoya Protocol on Access and Benefit-Sharing (ABS).	Frameworks are in place for ABS mechanisms.	Limited awareness and operationalisation at local levels.
<b>17. NBSAPs Updated and Implemented</b>	Regular updates and implementation of NBSAP with stakeholder engagement.	Continuous improvement of biodiversity strategies.	Full implementation at local levels and securing long-term funding
<b>18. Traditional Knowledge Respected</b>	Integration of traditional knowledge in biodiversity management.	Recognition and use of traditional practices.	Documentation and broader application of traditional knowledge.
<b>19. Knowledge Improved, Shared, and Applied</b>	Enhancing research and data sharing through collaborations with academic institutions.	Improved biodiversity databases and research outputs.	Need for more robust data management systems.
<b>20. Financial Resources from All Sources Increased</b>	Mobilisation of financial resources through international cooperation and national budgets.	Increased funding for biodiversity projects.	Sustainability of funding and diversification of financial sources.

**Source:** *6th national report to CBD, 2020 of reference*

## 6.4 IMPLEMENTATION GAPS

Studies showed that weak financial support, conflicting interests, and poorly integrated institutional and regulatory structures remain challenges for the effective implementation of the NBSAPs in many developing countries, including Rwanda (Santos, et al., 2023). Similarly, Rwanda faced several implementation gaps in its National Biodiversity Strategy and Action Plan (NBSAP). Some of the identified implementation gaps of the 2016–2020 NBSAP of Rwanda include the following:

### 6.4.1 Limited Financial Resources

There was insufficient funding for the comprehensive implementation of NBSAP activities aimed at achieving the set targets. These limited financial resources significantly constrained the execution of the Rwanda 2016–2020 NBSAP across various strategic objectives (REMA, 2020).

The impact of limited financial resources on the effective implementation of Rwanda's 2016–2020 can be summarised as follows:

**Incomplete Execution of Biodiversity Conservation Projects:** One of the primary impacts of limited financial resources was the inability to fully execute key biodiversity conservation projects. The 2016–2020 NBSAP outlined ambitious goals for expanding protected areas, restoring degraded ecosystems, and conserving threatened species. However, many of these projects remained underfunded, leading to delays or incomplete implementation.

**Insufficient Capacity Building and Technical Support:** Due to limited financial resources, this has negatively affected capacity development initiatives. Limited financial resources meant that training programs for local communities, government officials, and conservation practitioners were not adequately funded. As a result, the capacity to effectively manage and monitor biodiversity resources remained weak, undermining the overall effectiveness of the NBSAP.

**Inadequate Monitoring and Evaluation:** The financial limitations faced by Rwanda's 2016–2020 NBSAP led to significant gaps in monitoring and evaluation (M&E) activities. Insufficient funding meant that regular biodiversity assessments, data collection, and reporting were not consistently carried out. This lack of comprehensive M&E hampered the ability to track the success of conservation interventions and to adapt strategies based on real-time data.

### 6.4.2 Limited Technical Capacity

Insufficiently trained personnel with expertise in biodiversity conservation were challenged to effectively conduct scientific research, monitor change over time and improve management of biodiversity in Rwanda.



It was documented that there is a high need for human capacity development to enhance technical expertise for better biodiversity management because the successful implementation of the NBSAP depends on skilled manpower. Some of the observed challenges that affected the effective implementation of key aspects of the NBSAP include the following:

**Limited experts engaged in NBSAP implementation:** While Rwanda has made significant advances in human capacity development, there is still a need to enhance technical capacity through training new and existing personnel in implementing biodiversity conservation initiatives. Implementation of the NBSAP requires expertise in various fields, including ecology, environmental management, and conservation science.

Limited technical capacity is a gap which results in delays and inadequate development of projects and implementation. Furthermore, a limited number of trained personnel in data collection, analysis, and reporting led to inconsistencies in monitoring activities. As a result, there were significant gaps in the information needed to evaluate the effectiveness of conservation interventions and to make data-driven decisions.

**Challenges in Implementing Advanced Conservation Techniques:** The implementation of advanced conservation techniques, such as ecosystem restoration, species reintroduction, and genetic diversity conservation, requires specialised technical expertise. For example, efforts to restore degraded ecosystems and reintroduce endangered species faced challenges due to a lack of expertise in ecological restoration and wildlife management (REMA, 2016).

**Insufficient Training and Capacity Building Programs:** While the NBSAP recognised the importance of building technical capacity, the limited availability of training and capacity-building programs exacerbated the challenges faced during its implementation. The lack of continuous professional development opportunities for conservation practitioners meant that existing staff could not enhance their skills or stay updated with the latest conservation techniques and best practices. This stagnation further contributed to the overall technical capacity gap, making it difficult to address emerging biodiversity challenges effectively.

### **6.4.3 Limited Enforcement of Environmental and Biodiversity Laws and Regulations**

During the implementation period of the 2016–2020 NBSAP, while Rwanda has made progress in environmental law enforcement, for example, the establishment of a special department of Rwanda National Police and Rwanda Investigations Bureau to support law enforcement, there is still a need for further enhancement to curb, for example, poaching and logging.

#### 6.4.4 Limited Integration Across Sectors

One of the policy objectives of the Rwanda Biodiversity Policy is integrating the conservation and sustainable use of biological diversity into all sectoral and cross-sectoral plans, programmes and policies at all levels of government (REMA, 2011a). During the implementation of the 2016–2020 NBSAP, it has been noted that biodiversity considerations are not fully integrated into other sectors such as agriculture, infrastructure and tourism.

The integration of biodiversity considerations into sectors like agriculture, infrastructure, and tourism has been acknowledged as incomplete. For example, according to the Rwanda Environment Outlook, major agro-environmental problems are closely associated with the country's rapid and intensive agriculture and livestock farming, which include soil erosion and land degradation, water pollution and an increase in greenhouse gas emissions. Reports show that agricultural expansion into forests and wetlands continues to threaten biodiversity, suggesting that conservation principles are not fully incorporated into agricultural policies and practices. (USAID, 2015).

Therefore, it is important to note that the implementation of Rwanda's NBSAP faced significant challenges due to the limited integration of biodiversity considerations across various sectors of the economy. This lack of integration impeded the effectiveness of biodiversity conservation initiatives and undermined the overall objectives of the NBSAP. National Reports to the CBD Secretariat have also pointed out that biodiversity conservation was not sufficiently integrated into the mining sector and partly integrated into Agriculture, Land Use, Water Supply and Sanitation, Energy, Industry, Urbanisation and Rural Settlement Sectors.

**Conflicting Sectoral Priorities:** One of the major impacts of limited integration was the presence of conflicting priorities across different sectors. For instance, while the NBSAP emphasised the protection of natural habitats and ecosystems, sectors such as agriculture, mining, and infrastructure development often prioritised economic growth and expansion. The agricultural sector, for example, focused on increasing agricultural productivity, which frequently led to the conversion of forests and wetlands into farmland (REMA, 2016). This conflict between sectoral goals and biodiversity conservation efforts resulted in habitat loss and degradation, directly counteracting the objectives of the NBSAP.

**Limited Incorporation of Biodiversity into Development Planning:** Limited integration of biodiversity into national and sectoral development planning also poses significant challenges. Biodiversity considerations were often not fully embedded into the planning processes of key sectors such as agriculture, energy, and infrastructure. As a result, development projects were frequently implemented without sufficient assessment of their potential impacts on biodiversity. For instance, infrastructure projects such as road construction and urban development were often carried out in ecologically sensitive areas, leading to habitat fragmentation and increased pressure on biodiversity.



#### 6.4.6 Limited of Awareness on Biodiversity

It has been documented that many communities were not fully aware of the importance of biodiversity and how they could contribute to conservation efforts (RDB, 2019). For example, limited integration meant that biodiversity conservation was often not prioritised in educational programs, agricultural extension services, or community development initiatives. This lack of awareness and engagement weakened the support for biodiversity conservation efforts and limited the effectiveness of the NBSAP.

#### 6.4.7 Human-Wildlife Conflict

Human-wildlife conflicts presented considerable obstacles to the implementation of the 2016-2020 Rwanda NBSAP. These conflicts affected both the implementation of conservation activities and the well-being of local communities.

**Increased Pressure on Protected Areas:** One of the key challenges posed by human-wildlife conflicts was the increased pressure on protected areas. Rwanda's national parks and other protected areas, such as Volcanoes National Park and Akagera National Park, are home to diverse wildlife species, including elephants, gorillas, and lions. However, these areas are often adjacent to human settlements, leading to frequent interactions between wildlife and local communities. Wildlife encroachment into farmlands and settlements, driven by habitat loss and fragmentation, resulted in crop damage, livestock predation, and even human injuries or fatalities (REMA, 2016). These conflicts led to negative attitudes towards conservation initiatives and reduced local support for the NBSAP.

**Retaliatory Killing of Wildlife:** Human-wildlife conflicts often triggered retaliatory killings of wildlife by affected communities, undermining biodiversity conservation efforts. For instance, in response to crop raiding by elephants or livestock predation by carnivores, local farmers sometimes resorted to killing the offending animals. These retaliatory actions not only threatened endangered species but also disrupted ecosystem dynamics and reduced the effectiveness of conservation interventions outlined in the NBSAP.

**Strained Relationships Between Conservation Authorities and Local Communities:** The persistence of human-wildlife conflicts strained relationships between conservation authorities and local communities, complicating efforts to implement the NBSAP. Local communities, particularly those living near protected areas, often viewed wildlife as a threat to their livelihoods rather than a valuable resource to be conserved. This perception led to resistance against conservation measures and reduced cooperation with park authorities and conservation organisations (UNDP, 2020).

#### 6.4.8 Agricultural Expansion

Agriculture is a vital sector for Rwanda's economy, but unregulated agricultural expansion, driven by the need to enhance food security and economic development,

posed significant challenges to the implementation of Rwanda's 2016–2020 National Biodiversity Strategy and Action Plan (NBSAP). The expansion of farmland and intensification of agricultural activities often came at the expense of biodiversity conservation, hindering the achievement of the NBSAP's goals.

**Habitat Loss and Fragmentation:** One of the most direct impacts of agricultural expansion on biodiversity was the loss and fragmentation of natural habitats. Rwanda's commitment to increasing agricultural productivity led to the conversion of forests, wetlands, and other ecologically sensitive areas into farmland. This conversion resulted in the destruction of habitats that are crucial for the survival of various species, including those that are endemic or threatened (REMA, 2016). Habitat fragmentation further exacerbated the situation by isolating wildlife populations and making it more difficult for species to adapt to environmental changes. This loss of habitat directly undermined the NBSAP's objectives of protecting and restoring ecosystems.

**Increased Pressure on Protected Areas:** As agricultural lands expanded, the pressure on Rwanda's protected areas also intensified. Encroachment into protected areas by local communities seeking additional farmland was a common occurrence. This not only led to illegal land use within national parks and reserves but also increased the risk of human-wildlife conflicts, as wildlife strayed into adjacent farmlands in search of food.

**Overuse of Chemical Inputs:** The intensification of agriculture often involves the increased use of chemical inputs such as fertilisers, pesticides, and herbicides. While these inputs helped boost crop yields, they also had detrimental effects on biodiversity. The runoff of these chemicals into nearby rivers, lakes, and wetlands led to water pollution, which affected aquatic ecosystems and the species that depend on them. Additionally, the overuse of pesticides and herbicides reduced the populations of beneficial insects, pollinators, and other non-target species, disrupting ecological balance and reducing biodiversity in agricultural landscapes.

**Conflicting Land Use Policies:** Agricultural expansion was often driven by policies that prioritised food security and economic growth over environmental sustainability. The lack of integrated land use planning, where agricultural development was not adequately balanced with biodiversity conservation, led to conflicting land use policies. For example, initiatives to increase agricultural land often overlook the ecological value of the areas being converted, resulting in the loss of important biodiversity (UNDP, 2020).

#### 6.4.9 Data Deficiency and Limited Monitoring

There is a need for multidisciplinary data collection and analysis for making informed decisions and to continuously monitor biodiversity change over time. During the implementation of the 2016–2020 NBSAP, there was a lack of comprehensive and up-to-date data on biodiversity, resulting in difficulty to track biodiversity trends and the impact of conservation actions (NISR, 2020).



## 7. NATIONAL BIODIVERSITY PRINCIPLES, PRIORITIES, TARGETS AND STRATEGY

### 7.1 LONG-TERM VISION

Rwanda's updated National Biodiversity Strategy and Action Plan aligns with the long-term vision of the CBD Kunming-Montreal Global Biodiversity Framework, which envisions a world living in harmony with nature. This vision states: "By 2050, biodiversity is valued, conserved, restored, and wisely used, maintaining ecosystem services and delivering benefits essential for all people across the country."

### 7.2 PRINCIPLES GOVERNING THE STRATEGY

**1**

The principles governing the strategy establish a foundational approach for achieving effective biodiversity conservation and sustainable use, ensuring integration across sectors.

**2**

The NBSAP is a "living document", intended to be responsive, adaptable, and practical in addressing emerging biodiversity challenges.

**3**

Biodiversity conservation will be integrated into economic decision-making processes, transforming it into a driver for national development and sustainable growth.

**4**

Key economic sectors including agriculture and animal resources, forestry, mining, and infrastructure, will incorporate biodiversity conservation and sustainable use initiatives within their strategic planning frameworks and allocate dedicated funding in their annual budgets for upcoming years.



## 7.3 NATIONAL GOALS AND TARGETS ALIGNED WITH THE KUNMING-MONTREAL GBF

### 7.3.1 Strategic Goals

**Table 2 : Rwanda national biodiversity targets aligned with the targets of the Kunming-Montreal Global Biodiversity Framework has four long-term goals for 2050 related to the 2050 Vision for biodiversity.**

	Rwanda National Goal	Relevant GBF Goal(s)	Relevant GBF Target(s)	Alignment Notes
1	Conserve, maintain, and restore biodiversity and ecosystems.	GBF Goal A	Targets 1, 2, 3, 4, 5, 12	Aligns with halting biodiversity loss, protecting critical areas, and restoring degraded ecosystems.
2	Promote sustainable use of biodiversity resources while enhancing ecosystem services.	GBF Goals B & D	Targets 5, 9, 10, 11, 14	Supports sustainable use of species and ecosystem services, reducing overexploitation.
3	Strengthen capacity, governance, and resilience to climate change for biodiversity management.	GBF Goal D	Targets 14, 15, 21, 22, 23	Links to strengthening governance, inclusive decision-making, and adaptive capacity.
4	Ensure fair and equitable sharing of benefits derived from biodiversity.	GBF Goal C	Targets 13, 15	Supports access and benefit-sharing from genetic resources, aligned with the Nagoya Protocol.

Rwanda's National Biodiversity Strategy and Action Plan (NBSAP) is well aligned with the Kunming-Montreal Global Biodiversity Framework, focusing on conserving ecosystems, promoting sustainable resource use, and integrating biodiversity into key development sectors.

The strategy prioritises expanding protected areas, mainstreaming biodiversity into agriculture, mining, and infrastructure, and implementing Access and Benefit Sharing (ABS) aligned with the Nagoya Protocol. It also emphasises public awareness, securing financial and technical resources, and improving biodiversity monitoring and reporting systems to support evidence-based decision-making and long-term conservation goals.





**Table 3: Rwanda national biodiversity targets and baseline status**

TARGET	Proposed Country-specific target	Baseline/ Current Status
<b>Target 1</b>	By 2030, participatory biodiversity-inclusive spatial land use planning and management to ensure biodiversity loss is close to zero.	No consolidated information on the status of biodiversity-inclusive spatial planning and management.
<b>Target 2</b>	By 2030, increase the area of degraded lands and inland water (wetlands, lakes and areas critical for ecosystem services) under restoration by at least 10%.	The Climate, Environment and Natural Resources Sector Strategic Plan (2024-2029) has a baseline value of 332,861 ha and targets to increase this to 600,000 ha by 2029.
<b>Target 3</b>	By 2030, conserve and effectively manage at least 11% of terrestrial and inland water areas through ecologically representative and well-connected systems of protected areas and in a manner that respects local communities.	Currently, protected areas cover 9.1% of the country's land area (Rwanda Wildlife Conservation Masterplan 2025 - 2050).  The target increase is based on estimates from planned and ongoing flagship projects, including VCRP, Ibanda Makera, Kibirizi-Muyira, Nyandungu, Congo Nile Divide, RUDPII, and LDCF 4, among others.
<b>Target 4</b>	By 2030, enhance conservation measures to improve the conservation status of biodiversity, implement management actions to halt the extinction of threatened species and effectively manage human-wildlife conflict.	While there is a list of threatened species, there is limited planning for the protection of other species apart from the main species, namely mountain gorilla, chimpanzee ( <i>Pantrogodytes</i> ), and lion ( <i>Panthera leo</i> ), among others. Other species, e.g., of fish and buffalo, are threatened with extinction.  There is no comprehensive study/data on HWC in the country. However, a recent scientific study indicated 208 cases in Gishwati, 185 in Mukura and 108 in Mutara (Eastern Savanna-Akagera) in a one-year period (Sun, Bariyanga and Wronski, 2025).

TARGET	Proposed Country-specific target	Baseline/ Current Status
<b>Target 5</b>	By 2030, ensure the sustainable management of wild species on all managed lands (agriculture, forests and waters) and curb illegal harvesting.	<p>Rwanda has legislation for the illegal harvesting of wild species. However, cases of illegal activities, including fishing, are still experienced. E.g., significant numbers of illegal fishing nets and boats are confiscated from Lake Kivu each year. Data from RAB shows that fish production in Rwanda's frontiers of the Kivu Lake has dropped from 24,199 tonnes in 2017 to 16,194 tonnes in 2020, and this is attributed to illegal fishing operations (AUDA-NEPAD).</p> <p>Similar illegal activities also occur in the forest sector.</p>
<b>Target 6</b>	By 2030, prevent and control invasive alien species and reduce their rate of establishment by 50% in protected areas to minimise their impact on biodiversity and ecosystem services.	<p>There are 47 invasive species (plants, fish, and insects) identified in Rwanda (2016 REMA Report). All with various degrees of spread and impacts.</p> <p>Need to focus on invasives in protected areas, given the high priority/ importance of these landscapes. There is a need for a comprehensive assessment of the current rate of establishment of invasive species in Rwanda.</p>
<b>Target 7</b>	By 2030, reduce major pollutants from agriculture (including SLCP), industry and mining to levels that are not harmful to biodiversity and ecosystem functions and services through more efficient use and nutrient cycling, reducing the overall risks from pesticides and highly hazardous chemicals.	<p>Agriculture is a significant contributor to short-lived climate pollutants – methane, black carbon, and hydrofluorocarbons (HFCs). No specific metrics are available for Rwanda. 103,722 metric tons of inorganic fertiliser (NPK) were used in Rwanda in 2023 (Africa Fertiliser NEPAD report, 2023). Significant rates of leaching and pollution.</p> <p>No comprehensive report with statistics on pollution from mining actions. Specific studies, including sediment fingerprinting in some catchments, e.g., Secoko (IUCN, 2022), show high levels of pollutants originating from small-scale mining operations in the catchment.</p>



TARGET	Proposed Country-specific target	Baseline/ Current Status
<b>Target 8</b>	By 2030, minimise the impacts of climate change on biodiversity and build resilience in Rwanda through upscaling ongoing and new nature-based solutions and/or ecosystem-based Revenue/benefit projects in highly vulnerable landscapes.	Rwanda has a GGCRS in place in addition to Ireme Invest, green taxonomy and National Climate and Nature Finance Strategy, which, in part, recognises NbS as a climate resilience building mechanism. The country is currently implementing several large-scale projects that partly include NbS. These include  TREPA project (60,000 ha), COMBIO, Green Amayaga (263,000ha), Volcanoes Community Resilience Project (37,000ha), Congo-Nile Divide Restoration Project (10,000 ha), Forest Investment Program: Development of Agroforestry for Sustainable Agriculture in Rwanda (25,000ha); LIVEMP, LAFREC
<b>Target 9</b>	By 2030, ensure the sustainable management and use of wild species to enhance biodiversity conservation, and provide socio-economic benefits to communities in Rwanda.	Rwanda's tourism is anchored on its major national parks, which are key biodiversity areas. The country has a Revenue/benefit sharing mechanism in place (tourism revenue sharing (TRSP) to ensure communities around the parks obtain benefits for socio-economic development while also promoting sustainable management and use of wild species. 10% of the pooled tourism revenue from Volcanoes, Akagera, Nyungwe, Gishwati, and Mukura is allocated to communities located in the areas surrounding the parks.
<b>Target 10</b>	By 2030, improve sustainable management of areas under agriculture, aquaculture, fisheries, and forestry and ensure integration of biodiversity conservation and sustainable practices to enhance ecosystem health, food security, and livelihoods.	To enhance land productivity, Rwanda plans, in part, to develop an area under conservation agriculture by 22,000 as per PSTA 5. Conservation agriculture is directly linked to biodiversity conservation.  Rwanda currently has a 30.4% forest cover. At least 4,900 t/yr fish production (aquaculture) as per the National Aquaculture Strategy for Rwanda (2023-2035).
<b>Target 11</b>	By 2030, restore, maintain, and enhance ecosystem services and nature's contributions to people through nature-based solutions and/or ecosystem-based approaches to improve human well-being, resilience, and sustainable development.	The country is currently implementing several large-scale projects that partly enhance ecosystem service supply. These include TREPA project (60,000 ha), COMBIO, Green Amayaga (263,000 ha), the Volcanoes Community Resilience Project (37,000 ha), the Congo-Nile Divide Restoration Project (10,000 ha), and the Forest Investment Program: Development of Agroforestry for Sustainable Agriculture in Rwanda (25,000 ha).

TARGET	Proposed Country-specific target	Baseline/ Current Status
<b>Target 12</b>	By 2030, increase and improve urban green spaces and ensure biodiversity-inclusive and nature-friendly urban planning in Rwanda emphasising on native species to enhance human well-being, promote biodiversity, and support sustainable urban development.	There is no comprehensive assessment of existing green spaces in the city and urban centres of Rwanda. The NLUDMP 2020-2050 targets that every city/urban development should provide at least 20-25% area for green spaces by 2050.
<b>Target 13</b>	By 2030, strengthen effective legal measures and strategies and ensure that the benefits arising from the utilization of genetic resources and traditional knowledge are shared fairly and equitably	There is no baseline information for this target
<b>Target 14</b>	By 2030, ensure that biodiversity and its multiple values are integrated into policies, laws, regulations, plans, and decision-making processes across all sectors and levels of governance.	Rwanda already has a range of laws, policies, regulations and guidelines focusing, in part, on biodiversity conservation. The draft NBSAP document captures these in section IV.
<b>Target 15</b>	By 2030, large, transnational businesses and financial institutions operating in Rwanda will assess, disclose, and reduce their biodiversity-related risks and negative impacts, contributing to biodiversity conservation and sustainable development.	Rwanda has established Guidelines No. 040/2024 of 25th November 2024 on the disclosure and reporting of sustainability-related financial information for financial institutions and Guidelines N° 2600/2023 - 00036 [616] of 29/11/2023 on Climate-Related and Environmental Financial Risks Management for Financial Institutions. The target is that the full implementation of the guidelines be in place by December 2027.
<b>Target 16</b>	By 2030, all sectors are equipped and implement strategies to promote sustainable consumption and production among individuals, businesses, and government entities in Rwanda to reduce waste, minimise overconsumption and support biodiversity conservation.	Food waste index for Rwanda is 164 for Kigali and 117 for Musanze (UNEP's 2024).  No baseline information on material footprint per capital.  The average ecological footprint per capita for the country is 0.55 (Global Footprint Network, 2022 data).



TARGET	Proposed Country-specific target	Baseline/ Current Status
<b>Target 17</b>	By 2030, strengthen capacity for implementing biosafety measures and sustainable use of biotechnology products and services.	Rwanda has enacted the law governing biosafety, and Ministerial orders on permits and the national biosafety committee are in place.
<b>Target 18</b>	By 2030, identify possible harmful incentives and subsidies that negatively impact biodiversity and scale up positive incentives to promote biodiversity conservation and sustainable use in Rwanda.	Rwanda has initiated a study on the identification, assessment and redesign of subsidies with negative impacts on biodiversity in Rwanda.  Recommendations from this study will guide the implementation of this target.
<b>Target 19</b>	By 2030, mobilise five hundred (500) million USD from all sources and align financial flows with the conservation and sustainable use of biodiversity in Rwanda.	The proposed value is based on the consolidation of targets from key strategic documents, including REMA's Strategy (2022-26), Rwanda's GGCRS, and RGF targets.
<b>Target 20</b>	By 2030, strengthen capacity-building, technology transfer, scientific research, and technical cooperation to enhance biodiversity conservation and sustainable use, and strengthen communication, awareness-raising, education, and monitoring.	There are no baseline or consolidated metrics on capacity-building and biodiversity-related technology transfer actions in Rwanda.
<b>Target 21</b>	By 2030, (i) ensure that biodiversity-related data, information, and knowledge are readily available, accessible, and utilised to inform and guide biodiversity conservation and sustainable use	Rwanda has established the Rwanda Biodiversity Information System (RBIS), an accessible web platform using open-source software to support land use planning and monitoring of biodiversity and ecosystem functioning.
<b>Target 22</b>	By 2030, ensure that all stakeholders, including women, youth, and persons with disabilities, can participate in biodiversity-related decision-making processes and information respecting traditional knowledge.	While there are activities related to this indicator, there is no consolidated baseline data.

**Table 4: Rwanda National Biodiversity Targets, Indicators and Strategic Actions for the updated NBSAP (2025-2030)**

National targets	Goal	Indicators	Strategic actions
<p><b>Target 1</b></p> <p><b>By 2030, participatory biodiversity-inclusive spatial land use planning and management to ensure that biodiversity loss is close to zero</b></p>	A	<p><b>Headline Indicator:</b> Percentage of land and water bodies area covered by biodiversity-inclusive spatial plans</p> <p><b>Complementary indicators:</b></p> <ol style="list-style-type: none"> <li>I. Percentage of spatial plans utilising information on Key Biodiversity Areas;</li> <li>II. Number of Key Biodiversity Areas included in the spatial planning;</li> <li>III. Areas of degraded ecosystems with high biodiversity importance are identified and prioritised.</li> </ol>	<ul style="list-style-type: none"> <li>• Mainstream biodiversity into the Agriculture Land-use Masterplan (LUMP),</li> <li>• Establish baseline information on the status of biodiversity-inclusive spatial planning and management under the 7th National Report to the CBD.</li> <li>• Ensure biodiversity consideration within regulations and guidelines for land lease (contract farming) and the EIA process.</li> <li>• Develop spatial plans that integrate the conservation of Key Biodiversity and Bird Areas (KBAs) to promote the expansion and sustainable utilisation of biodiversity-important areas.</li> <li>• Integrate migratory flyway conservation into national land-use planning processes.</li> <li>• Assess the integration of biodiversity considerations in Strategic Environmental Assessments (SEA) and Environmental and Social Impact Assessments (ESIA)</li> <li>• Integrate biodiversity considerations into land-use planning.</li> <li>• Establish a land use monitoring framework for ensuring the protection of high-biodiversity importance areas from human development activities.</li> </ul>



National targets	Goal	Indicators	Strategic actions
<p><b>Target 2</b></p> <p><b>By 2030, increase the area of degraded lands, and inland water (Wetlands, lakes and rivers), and areas critical for ecosystem services, under restoration by at least 10%.</b></p>	A	<p><b>Headline Indicator:</b></p> <p>Area of degraded land, and in land water (Wetlands, lakes and rivers)</p> <p><b>Component indicators:</b></p> <ol style="list-style-type: none"> <li>I. Areas of degraded wetland ecosystems with high biodiversity importance restored,</li> <li>II. Areas of degraded natural forest and reserve with high biodiversity importance restored,</li> <li>III. Areas of degraded lakes and rivers with high biodiversity importance restored</li> </ol>	<ul style="list-style-type: none"> <li>• Develop and implement a single long-term management strategy for wetlands, remnant forests and other ecosystems.</li> <li>• Identify and restore degraded land using native species, including protected wetlands located outside protected areas.</li> <li>• Identify and restore other important areas for biodiversity with a high need for restoration and protection.</li> <li>• Foster ecosystem rehabilitation, restoration, and biodiversity protection through community-developed ecosystem-based adaptation approaches in selected landscapes.</li> <li>• Establish partnership programs for the involvement of the private sector in biodiversity conservation within a specific ecosystem.</li> <li>• Strengthen wetland management through the establishment of a sustainable eco-park.</li> <li>• Restore degraded landscapes through effective erosion control, agroforestry, afforestation, assisted natural regeneration, and savannah/shrubs restoration efforts to enhance ecosystem services and biodiversity.</li> </ul>

National targets	Goal	Indicators	Strategic actions
<p><b>Target 3</b></p> <p><b>By 2030, conserve and effectively manage at least 11% of terrestrial and inland water areas through ecologically representative and well-connected systems of protected areas and in a manner that respects local communities.</b></p>	A	<p><b>Headline Indicator:</b> Area (Ha) of land and inland water (wetlands, lakes and rivers) with high biodiversity importance conserved and effectively managed, Coverage of protected areas and other effective area-based conservation measures</p> <p><b>Component indicators:</b></p> <ol style="list-style-type: none"> <li>I. Area (Ha) of Key Biodiversity Areas effectively conserved and effectively managed;</li> <li>II. Area (Ha) of wetlands of international importance conserved and effectively managed.</li> </ol>	<ul style="list-style-type: none"> <li>• Sustain existing protected areas with a focus on biodiversity hotspots and critical ecosystems.</li> <li>• Promote sustainable practices within and around protected areas with full and effective participation of local communities.</li> <li>• Maintain restored ecosystems under protection to promote long-term sustainability, biodiversity conservation, and ecosystem resilience.</li> <li>• Empower local communities to sustainably manage land and inland water ecosystems through community-based conservation approaches.</li> </ul>
<p><b>Target 4</b></p> <p><b>By 2030, enhance conservation measures to improve the conservation status of biodiversity, implement management actions to halt the extinction of threatened species and effectively manage human-wildlife conflict.</b></p>	A	<p><b>Headline Indicator:</b></p> <ol style="list-style-type: none"> <li>I. Proportion of threatened species effectively conserved to halt and reverse their human-induced decline.</li> <li>II. Number of guidelines developed to protect genetic diversity and manage human-wildlife conflict effectively.</li> </ol>	<ul style="list-style-type: none"> <li>• Adopt best restoration practices that prioritise the preservation and recovery of native threatened species.</li> <li>• Undertaking National IUCN Red Listing work under the 7th Report to the CBD.</li> <li>• Assess the conservation status of all wetlands and promote conservation mechanisms.</li> <li>• Adopt best restoration practices for a healthy ecosystem through the preservation and recovery of native threatened species and their genetic resources.</li> </ul>



National targets	Goal	Indicators	Strategic actions
		<p><b>Component indicators:</b></p> <ol style="list-style-type: none"> <li>I. Percentage of threatened species that are improving in status;</li> <li>II. Conservation status of species listed in the CITES Appendices has stabilised or improved.</li> </ol>	<ul style="list-style-type: none"> <li>• Develop strategies to reduce and manage human-wildlife conflict and its drivers through a holistic, cross-sectoral approach.</li> <li>• Promote biodiversity monitoring of threatened species and their habitats.</li> <li>• Develop national guidelines for the preservation of genetic resources in Ex Situ and In Situ conservation</li> </ul>
<p><b>Target 5</b></p> <p><b>By 2030, ensure the sustainable management of wild species on all managed lands (agriculture, forests and waters) and curb illegal harvesting.</b></p>	B	<p><b>Headline indicator:</b> Proportion of illegal harvesting curbed</p> <p><b>Component indicators:</b> Proportion of fish stocks within biologically sustainable levels</p> <p><b>Complementary indicators:</b> Number of inspections to enforce the regulation for both wild species and fisheries within all managed lands.</p>	<ul style="list-style-type: none"> <li>• Develop and implement guidelines for sustainable management of biodiversity in agriculture, land and aquaculture.</li> <li>• Promote technology for Aquaculture to maintain the native species</li> <li>• Support the establishment of aquaparks</li> <li>• Enhance the knowledge and skills of fishers, fish farmers, and other value chain actors in sustainable fishing practices to ensure the conservation of aquatic biodiversity and long-term ecosystem health.</li> <li>• Enhance compliance and enforcement through various monitoring and regular inspections to ensure that species are safe and well managed.</li> </ul>

National targets	Goal	Indicators	Strategic actions
<p><b>Target 6</b></p> <p><b>By 2030, prevent and control invasive alien species and reduce their rate of establishment in protected areas to minimise their impact on biodiversity and ecosystem services.</b></p>	B	<p><b>Headline indicator:</b> Number of invasive alien species reduced</p> <p><b>Component indicators:</b> Number of invasive alien species introduction events</p> <p><b>Complementary indicators:</b> Number of invasive alien species on national lists as per the Global Register of Introduced and Invasive Species;</p>	<ul style="list-style-type: none"> <li>• Develop and implement national strategies and regulations on the prevention, control, and management of invasive alien species.</li> <li>• Update the Invasive species assessment report for Rwanda (last done in 2016), and revise the control plan and assess the success of the current implementation of the plan.</li> <li>• Strengthen surveillance, monitoring, and management strategies on invasive alien species.</li> <li>• Conduct research studies on invasive alien species to improve early detection and rapid response protocols.</li> <li>• Strengthen biosecurity measures at entry points (airports, ports, borders).</li> <li>• Implement control and eradication programs of invasive alien species in protected areas, reserves, wetlands, lakes and rivers.</li> <li>• Put in place measures to regularly update the list of invasive species.</li> <li>• Train private sector stakeholders involved in the seedling production business on effective invasive species control and management in tree nurseries.</li> </ul>



National targets	Goal	Indicators	Strategic actions
<p><b>Target 7</b></p> <p><b>By 2030, reduce major pollutants from agriculture (including SLCP), industry and mining to levels that are not harmful to biodiversity and ecosystem functions and services through more efficient use and nutrient cycling, reducing the overall risks from pesticides and highly hazardous chemicals.</b></p>	B	<p><b>Headline indicators:</b> Concentration of pollutants in the environment.</p> <p><b>Component indicators:</b></p> <ol style="list-style-type: none"> <li>I. Proportion of fertilisers used efficiently,</li> <li>II. Proportion of domestic and industrial wastewater flow safely treated,</li> <li>III. Floating plastic debris density in the environment, and</li> <li>IV. Annual number of pesticides used.</li> </ol> <p><b>Complementary indicators:</b></p> <ol style="list-style-type: none"> <li>I. Amount of nitrogen loss in the environment,</li> <li>II. proportion of solid waste collected and managed,</li> <li>III. amount and types of hazardous waste generation and</li> <li>IV. Organic fertiliser use per area of cropland.</li> </ol>	<ul style="list-style-type: none"> <li>• Promote the use of organic fertilisers to enhance soil health.</li> <li>• Develop a mine drainage and leaching of contaminant plan, associated with mining metals, to avoid impacts on water bodies.</li> <li>• Establish a mechanism for data and information gathering on major pollutants from different sectors.</li> <li>• Reduce chemical runoff and promote biodiversity conservation in agricultural lands.</li> <li>• Conduct research on nitrogen use efficiency on priority crops and disseminate the findings for practical application in agricultural fields.</li> <li>• Promote integrated pest management (IPM) to minimise the reliance on chemicals while ensuring effective crop protection.</li> <li>• Empower the community in the management of chemical waste and hazardous waste to enhance the protection of biodiversity and ecosystem health.</li> <li>• Promote strategies that can facilitate the re-use and recycling of inorganic waste.</li> <li>• Develop and enforce regulations and guidelines of fertilisers and pesticides use in wetlands, leading to improved water quality and healthy ecosystems.</li> <li>• Conduct an assessment on pesticide usage and pesticide residues in the environment.</li> </ul>

National targets	Goal	Indicators	Strategic actions
<p><b>Target 8</b></p> <p><b>By 2030, minimise the impacts of climate change on biodiversity and build resilience in Rwanda through upscaling ongoing and new nature-based solutions and/or ecosystem-based projects in highly vulnerable landscapes.</b></p>	B	<p><b>Component indicators:</b> National greenhouse inventories from land use and land use change.</p> <p><b>Complementary indicators:</b></p> <ol style="list-style-type: none"> <li>I. Above-ground biomass stock in forests (tonnes/ha);</li> <li>II. National greenhouse inventories from land use and land use change;</li> <li>III. Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies.</li> </ol>	<ul style="list-style-type: none"> <li>• Maintain and expand the forest cover to more than 30.4% of Rwandan territory.</li> <li>• Implement mitigation measures to reduce greenhouse gas (GHG) emissions from key sectors.</li> <li>• Enhance nature-based solutions such as ecosystem-based adaptation (EbA) approaches.</li> <li>• Improve monitoring and reporting systems to track climate change impacts on biodiversity.</li> <li>• Increase the number of households protected from floods from 9% to 40%.</li> <li>• Enhance Conservation Efforts in Buffer Zones.</li> <li>• Build the capacity of local government officials and planners to develop and align Local DRR strategies with the national framework</li> </ul>
<p><b>Target 9</b></p> <p><b>By 2030, ensure the sustainable management and use of wild species to enhance biodiversity conservation and provide socio-economic benefits to communities in Rwanda.</b></p>	C	<p><b>Headline indicators:</b> Benefits from the sustainable use of wild species. Sustainability and benefits from the use of wild species.</p> <p><b>Component indicators:</b> Number of people benefiting from wild resources for food, medicinal use, craft making and culture</p>	<ul style="list-style-type: none"> <li>• Strengthen collaboration between communities, researchers, and public and private institutions to promote the sustainable use of medicinal plants.</li> <li>• Integrate new genetic varieties of plants and animals to strengthen biodiversity, enhance ecosystem resilience, and promote adaptability to changing environmental conditions.</li> </ul>



National targets	Goal	Indicators	Strategic actions
		<p><b>Complementary indicators:</b></p> <p>Number of plant and animal genetic resources for food and agriculture secured in conservation facilities.</p>	<ul style="list-style-type: none"> <li>• Establish frameworks to use, enhance and equitable benefit sharing from national park licenses and other international and national payment for ecosystem services schemes to benefit local communities and support conservation initiatives.</li> <li>• Promote alternative livelihoods such as eco-tourism, agroforestry, and other sustainable income-generating activities to reduce pressure on wild species.</li> </ul>
<p><b>Target 10</b></p> <p><b>By 2030, improve sustainable management of areas under agriculture, aquaculture, fisheries, and forestry and ensure integration of biodiversity conservation and sustainable practices to enhance ecosystem health, food security, and livelihoods.</b></p>	C	<p><b>Headline indicators:</b></p> <ol style="list-style-type: none"> <li>I. Proportion of agricultural area under productive and sustainable agriculture;</li> <li>II. Proportion of forest under sustainable management;</li> <li>III. Area under aquaculture and fisheries with sustainable management</li> </ol> <p><b>Component indicators:</b></p> <ol style="list-style-type: none"> <li>I. total forest management certification by a responsible institution for the Endorsement of Forest Certification;</li> <li>II. average income of small-scale food producers.</li> </ol> <p><b>Complementary indicators:</b></p> <p>Proportion of degraded agriculture and forest land</p>	<ul style="list-style-type: none"> <li>• Implement circular economy models for integrated fish and plant production (aquaponics) that reduce the use of chemical fertilisers, enhance resource efficiency, and support the conservation of aquatic and terrestrial biodiversity.</li> <li>• Promote apiculture in appropriate bee reserves (including in protected areas and natural forests, among others) away from intensive agricultural activities.</li> <li>• Expand the area under agro-ecology, conservation agriculture/regenerative agriculture and promote decarbonising practices.</li> <li>• Enhance law enforcement for forest protection and biodiversity conservation, and implement an urban forest management plan.</li> <li>• Assessment and Gap Analysis for Forest Management Certification and Recommendations.</li> <li>• Assess degraded Agricultural and forest land and propose measures for restoration</li> </ul>

National targets	Goal	Indicators	Strategic actions
<p><b>Target 11</b></p> <p><b>By 2030, restore, maintain, and enhance ecosystem services and nature's contributions to people through nature-based solutions and/or ecosystem-based approaches to improve human well-being, resilience, and sustainable development.</b></p>	C	<p><b>Headline Indicators:</b></p> <p>Levels of ecosystem services provided by restored ecosystems and landscapes.</p> <p><b>Component indicators:</b></p> <ol style="list-style-type: none"> <li>I. Mortality rate attributed to unsafe water, unsafe sanitation, and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services,</li> <li>II. Annual mean levels of fine particulate matter (e.g., PM2.5 and PM10),</li> <li>III. Proportion of bodies of water with good ambient water quality,</li> <li>IV. Annual soil loss by erosion</li> </ol> <p><b>Complementary indicators:</b></p> <ol style="list-style-type: none"> <li>I. proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management,</li> <li>II. proportion of population using safely managed drinking water services,</li> <li>III. respiratory disease rate attributed to household and ambient air pollution (SDG indicator 3.9.1).</li> </ol>	<ul style="list-style-type: none"> <li>• Strengthen and expand air pollution stations across all districts while enhancing regulatory oversight and enforcement to effectively mitigate both air and water pollution.</li> <li>• Promote behavioural shifts towards low-emission practices, such as walking and cycling, and the use of gas for cooking.</li> <li>• Enforce measures for reducing emissions from industry and motorised vehicles.</li> <li>• Increase research on forest diseases, pests or parasites and set strategies for preventing and controlling them in collaboration with other organs.</li> <li>• Improve ecosystem services in urban areas by implementing sustainable urban planning that incorporates nature-based solutions.</li> <li>• Promote Water, Sanitation, and Hygiene (WASH) through greening school initiatives.</li> <li>• Conduct research on air quality and associated environmental and health impacts.</li> </ul>



National targets	Goal	Indicators	Strategic actions
<p><b>Target 12</b></p> <p><b>By 2030, increase and improve urban green spaces and ensure biodiversity-inclusive and nature-friendly urban planning in Rwanda, emphasising on native species to enhance human well-being, promote biodiversity, and support sustainable urban development.</b></p>	C	<p><b>Headline indicators:</b></p> <p>Average share of the built-up area of cities that is green/blue space for public use for all</p> <p><b>Component indicators:</b></p> <p>IV. Area providing recreation and cultural services (hectares). V. Area under urban forestry (hectare)</p> <p><b>Complementary indicator:</b></p> <p>I. City Biodiversity Index (CBI) for the City of Kigali, satellite and secondary cities.</p>	<ul style="list-style-type: none"> <li>• Conduct a baseline assessment of urban green spaces in major urban areas.</li> <li>• Develop and implement NBS plans for cities and towns in line with the existing master plan</li> <li>• Enhance the quality and accessibility of existing green spaces.</li> <li>• Promote biodiversity conservation within urban green spaces (e.g., native plant species adapted to urban areas).</li> <li>• Develop guidelines for green spaces that integrate biodiversity conservation in the urban areas</li> </ul>
<p><b>Target 13</b></p> <p><b>By 2030, strengthen effective legal measures and strategies and ensure that the benefits arising from the utilisation of genetic resources and traditional knowledge are shared fairly and equitably.</b></p>	C	<p><b>Headline indicators:</b></p> <p>I. Monetary benefits received; II. Non-monetary benefits received.</p> <p><b>Component indicators:</b></p> <p>I. Number of regulations developed to ensure fair and equitable sharing of benefits from genetic resources and traditional knowledge, II. Number of authorisations granted, according to types and categories, for genetic resources (including those related to traditional knowledge).</p>	<ul style="list-style-type: none"> <li>• Develop a baseline of benefits arising from the utilisation of genetic resources.</li> <li>• Facilitate the access and transfer of crop genetic materials mechanisms at national and international levels and ensure fair and equitable benefit sharing.</li> <li>• Develop and strengthen guidelines and permit application systems to ensure the fair and equitable sharing of benefits from genetic resources and traditional knowledge.</li> <li>• Implement effective mechanisms that facilitate the sharing of monetary and non-monetary benefits with local communities.</li> </ul>

National targets	Goal	Indicators	Strategic actions
		<p><b>Complementary indicators:</b></p> <ol style="list-style-type: none"> <li>I. Total number of transfers of crop material from the Multilateral System of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) received in a country;</li> <li>II. Total number of permits, or their equivalent, granted for access to genetic resources;</li> <li>III. Total number of internationally recognized certificates of compliance published in the ABS Clearing-House,</li> <li>IV. Estimated percentage of monetary and non-monetary benefits directed</li> </ol>	<ul style="list-style-type: none"> <li>• Protect and promote the use of traditional knowledge associated with genetic resources and biodiversity.</li> <li>• Enhance international cooperation on ABS issues related to genetic resources and traditional knowledge.</li> </ul>
<p><b>Target 14</b>  <b>By 2030, ensure that biodiversity and its multiple values are integrated into policies, laws, regulations, plans, and decision-making processes across all sectors and levels of governance.</b></p>	<p>D</p>	<p><b>Component indicators:</b></p> <p>Number of policies, regulations, and plans that include biodiversity consideration.</p> <p><b>Complementary indicators:</b></p> <p>Number of policies, regulations and plans that incorporate biodiversity considerations.</p> <p>Increase in cross-sectoral collaborations and joint initiatives.</p> <p>Enhancement in public awareness and participation in biodiversity conservation.</p>	<ul style="list-style-type: none"> <li>• Strengthen the budget tagging, the budget statement for CENR with a biodiversity section.</li> <li>• Produce the biodiversity budget statement report.</li> <li>• Integrate biodiversity and its values into national development plans, national accounting, local government strategies, and sectoral policies.</li> <li>• Promote the valuation of ecosystem services in decision-making processes.</li> <li>• Integrate biodiversity considerations in sectors and district annual plans and performance contracts and the annual environment and climate change assessments report.</li> </ul>



National targets	Goal	Indicators	Strategic actions
			<ul style="list-style-type: none"> <li>• Mainstream biodiversity into ESIA guidelines.</li> <li>• Revise the Rwanda National Biodiversity Policy.</li> <li>• Develop Environmental-Economic Accounting (SEEA) for national biodiversity monitoring systems;</li> <li>• Develop national biodiversity standards aligned with international biodiversity</li> </ul>
<p><b>Target 15</b></p> <p><b>By 2030, large, transnational businesses and financial institutions operating in Rwanda will assess, disclose, and reduce their biodiversity-related risks and negative impacts, contributing to biodiversity conservation and sustainable development.</b></p>	D	<p><b>Headline indicators:</b> Number of organisations taking action on nature-related risk, dependencies and impacts on biodiversity.</p> <p><b>Component indicators:</b> Action plans are designed following reports on nature-related risk</p> <p><b>Complementary indicators:</b> Number of companies publishing sustainability reports.</p>	<ul style="list-style-type: none"> <li>• Develop baseline information through a readiness study on nature-related financial disclosure.</li> <li>• Update and strengthen legal frameworks that require businesses and companies to identify, implement, and disclose actions related to their dependencies on nature and associated risks.</li> <li>• Build institutional capacity and legal frameworks for businesses and companies on nature-related financial disclosures and biodiversity risks.</li> <li>• Create and promote legal frameworks and guidelines for businesses to assess, disclose and adopt practices that minimise negative impacts on biodiversity-related risks and impacts in their reporting processes. While promoting conservation.</li> </ul>

National targets	Goal	Indicators	Strategic actions
<p><b>Target 16</b></p> <p><b>By 2030, all sectors are equipped and implement strategies to promote sustainable consumption and production among individuals, businesses, and government entities in Rwanda to reduce waste, minimise overconsumption and support biodiversity conservation.</b></p>	D	<p><b>Component indicators:</b></p> <ol style="list-style-type: none"> <li>I. Update Food waste index,</li> <li>II. Material footprint per capita,</li> <li>III. Ecological footprint</li> </ol> <p><b>Complementary indicators:</b></p> <ol style="list-style-type: none"> <li>I. Extent to which</li> <li>II. In: (a) national education policies on responsible consumption &amp; waste disposal, (b) curricula, (c) teacher education and (d) student assessments;</li> <li>III. Recycling rate,</li> <li>IV. Life Cycle Impact Assessment (LCIA), e.g., Lifecycle Impact Assessment Method based on Endpoint Modelling (LIME);</li> <li>V. Promotion of circular economy in all sectors.</li> </ol>	<ul style="list-style-type: none"> <li>• Establish baseline information on material footprint per capita.</li> <li>• Identify/develop strategies and guidelines for sustainable consumption and production across sectors.</li> <li>• Increase public awareness and education on sustainable consumption and its benefits.</li> <li>• Promote eco-labelling and certification schemes for sustainable products and services.</li> <li>• Encourage businesses to adopt sustainable practices and reduce waste in their operations.</li> <li>• Integrate sustainable consumption and waste reduction criteria into public procurement processes.</li> <li>• Conduct research studies on Life Cycle Impact Assessment to improve data quality and modelling techniques for food waste management and ecological footprint.</li> <li>• Promote the circular economy across all sectors, with a strong focus on the private sector to drive innovation and solutions in food waste management.</li> </ul>

National targets	Goal	Indicators	Strategic actions
<p><b>Target 17</b></p> <p><b>By 2030, strengthen capacity for implementing biosafety measures and sustainable use of biotechnology products and services.</b></p>	D	<p><b>Headline indicators:</b></p> <ol style="list-style-type: none"> <li>I. Number of regulations and guidelines related to biosafety developed and implemented,</li> <li>II. Number of authorisations granted for the projects working on Genetically Modified Organisms (GMOs).</li> </ol> <p><b>Component indicators:</b></p> <ol style="list-style-type: none"> <li>I. Number of people, including private and public sectors, trained on biosafety,</li> <li>II. Number of laboratories and facilities accredited for biosafety research and testing,</li> <li>III. Availability and accessibility of modern equipment and technologies for biosafety measures.</li> </ol> <p><b>Complementary indicators:</b></p> <p>Frequency of monitoring and scientific reports on risk assessment for biosafety-related projects.</p>	<ul style="list-style-type: none"> <li>• Develop guidelines for the effective implementation of the law governing biosafety.</li> <li>• Enhance the capacity building and development of institutions and technical personnel to manage risk associated with the use of Genetic Modified Organisms effectively.</li> <li>• Develop mechanisms to ensure that the benefits of biotechnology are shared fairly among all stakeholders.</li> <li>• Put in place mechanisms for the detection and identification of GMOs in plants, food and feeds.</li> <li>• Put in place a robust and effective monitoring risk assessment system for GMOs.</li> <li>• Develop guidelines for regulating GMO activities and administrative tools and documents related to biosafety applications.</li> <li>• Enhance public awareness of the biosafety measures of GMOs.</li> </ul>

National targets	Goal	Indicators	Strategic actions
<p><b>Target 18</b></p> <p><b>By 2030, identify possible harmful incentives and subsidies that negatively impact biodiversity and scale up positive incentives to promote biodiversity conservation and sustainable use in Rwanda.</b></p>	D	<p><b>Headline Indicators:</b></p> <ol style="list-style-type: none"> <li>I. Percentage of Positive incentives in place to promote biodiversity conservation and sustainable use;</li> <li>II. Value of subsidies and other incentives harmful to biodiversity that have been eliminated, phased out or reformed</li> </ol> <p><b>Complementary indicators:</b></p> <ol style="list-style-type: none"> <li>I. Trends in potentially environmentally harmful elements with negative impact from government support to agriculture (producer support estimate);</li> <li>II. Trends in the number and value of government fossil fuel support measures;</li> <li>III. Find other alternatives to replace subsidies with a negative impact on biodiversity.</li> </ol>	<ul style="list-style-type: none"> <li>• Raise awareness on harmful incentives and subsidies</li> <li>• Conduct a comprehensive study for review of existing subsidies and incentives that harm biodiversity, and develop a strategic plan for their gradual reduction</li> <li>• Promote positive incentives for biodiversity conservation and sustainable use through financial incentives, payment for ecosystem services (PES), and certification and eco-labelling programs.</li> <li>• Ensure that biodiversity considerations are integrated into national and sectoral budgeting and planning processes.</li> </ul>



National targets	Goal	Indicators	Strategic actions
<p><b>Target 19</b></p> <p><b>By 2030, mobilise five hundred (500) million USD from all sources and align financial flows with the conservation and sustainable use of biodiversity in Rwanda.</b></p>	D	<p><b>Headline indicators:</b></p> <ol style="list-style-type: none"> <li>I. International public funding, including official development assistance for conservation and sustainable use of biodiversity and ecosystems;</li> <li>II. Domestic public funding of conservation and sustainable use of biodiversity and ecosystems;</li> <li>III. Private funding (domestic and international) of conservation and sustainable use of biodiversity and ecosystems.</li> </ol> <p><b>Complementary indicators:</b></p> <ol style="list-style-type: none"> <li>I. Amount of funding mobilised through the Global Environment Facility (GEF);</li> <li>II. Funding from fines and fees collected from environmental degradation and pollution.</li> </ol>	<ul style="list-style-type: none"> <li>• Conduct a biodiversity expenditure review and biodiversity needs assessment.</li> <li>• Develop and operationalise a dedicated biodiversity window under the Rwanda Green Fund.</li> <li>• Identify and secure funding sources, including government allocations, international grants, and partnerships with NGOs and private sector stakeholders to support restoration initiatives.</li> <li>• Establish a partnership with the private sectors, philanthropies and NGOs for resource mobilisation to promote biodiversity conservation.</li> <li>• Update a national biodiversity finance plan to identify and prioritise funding needs, sources, and strategies.</li> <li>• Enhance private sector engagement through corporate social responsibility and public-private partnerships.</li> <li>• Support environmental inspection and enhance the collection of fines and fees through digital finance</li> </ul>

National targets	Goal	Indicators	Strategic actions
<p><b>Target 20</b></p> <p><b>By 2030, strengthen capacity-building, technology transfer, scientific research, and technical cooperation to enhance biodiversity conservation and sustainable use, and strengthen communication, awareness-raising, education, and monitoring.</b></p>	<p>D</p>	<p><b>Headline indicators:</b></p> <ol style="list-style-type: none"> <li>I. Number of capacity-building programs implemented and</li> <li>II. Adoption of new biodiversity monitoring and conservation technologies</li> </ol> <p><b>Component indicators:</b></p> <ol style="list-style-type: none"> <li>I. Participants trained in biodiversity monitoring and conservation,</li> <li>II. Number of collaborative research projects and scientific publications.</li> </ol> <p><b>Complementary indicators:</b></p> <p>Improve biodiversity data collection and information systems based on current data, and enhance data management systems.</p>	<ul style="list-style-type: none"> <li>• Develop Rwanda’s 7th national report to the CBD</li> <li>• Aggregate training and capacity-building actions annually.</li> <li>• Enhance research efforts on climate-resilient and disease-resistant crop varieties.</li> <li>• Build the capacity of regulators and scientists for effective wetland data collection and management to support biodiversity conservation.</li> <li>• Develop a national biodiversity baseline that provides critical data for effective biodiversity management and monitoring.</li> <li>• Facilitate the transfer of biodiversity-related technologies and promote innovation.</li> <li>• Strengthen scientific and technical cooperation at national, regional, and international levels.</li> <li>• Strengthen biodiversity information systems to support decision-making and policy development.</li> <li>• Develop a public database or platform where the list is accessible to researchers, policymakers, conservationists, and the public.</li> <li>• Enhance educational practices within protected areas to foster school and community engagement</li> <li>• Develop and implement a training program on biodiversity monitoring and conservation to enhance local capacities and engage community involvement in conservation efforts</li> </ul>



National targets	Goal	Indicators	Strategic actions
			<ul style="list-style-type: none"> <li>Promote collaboration among academic researchers, public and private institutions and local NGOs to enhance biodiversity research and contribute to scientific publications</li> <li>Strengthen the capacity of environmental committees to promote sustainable management and conservation of biodiversity</li> </ul>
<p><b>Target 21</b></p> <p><b>By 2030, ensure that biodiversity-related data, information, and knowledge are readily available, accessible, and utilised to inform and guide biodiversity conservation and sustainable use.</b></p>	D	<p><b>Headline indicators:</b></p> <ol style="list-style-type: none"> <li>Biodiversity information system for data sharing and monitoring available and accessible.</li> </ol> <p><b>Component indicators:</b> Extent to which</p> <ol style="list-style-type: none"> <li>Global citizenship education and</li> <li>Education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessments</li> </ol>	<ul style="list-style-type: none"> <li>Enhance biodiversity monitoring and conservation efforts by enabling more efficient and timely data collection on ecosystems and species through innovative technologies.</li> <li>Create awareness of and the utility of the RBIS</li> <li>Establish a national IUCN Red List</li> <li>Ensure that biodiversity data, information and resources are clearly explained through communication materials and training programs, making them easily accessible to public agencies and other relevant stakeholders</li> <li>Create programs that promote the sharing of information aligned with research, innovation, and technological advancements in biodiversity, aimed at effectively disseminating this knowledge to decision-makers and stakeholders</li> <li>Regularly, update CHM Rwanda with stakeholder engagement</li> </ul>

National targets	Goal	Indicators	Strategic actions
<p><b>Target 22</b></p> <p><b>By 2030, ensure that all stakeholders, including women, youth, and persons with disabilities, can participate in biodiversity-related decision-making processes and information respecting traditional knowledge.</b></p>	D	<p><b>Component indicators:</b></p> <p>Proportion of stakeholders participating in biodiversity-related decision-making processes includes communities by sex and age groups.</p>	<ul style="list-style-type: none"> <li>• Establish baseline information on gender inclusion in biodiversity conservation actions.</li> <li>• Engage women, youth, and persons with disabilities in biodiversity conservation efforts through education, empowerment, and community involvement.</li> <li>• Train women, youth, and persons with disabilities in biodiversity monitoring techniques such as species identification, habitat restoration, and data collection using GPS and other tools.</li> <li>• Organise leadership training sessions to equip women, youth, and persons with disabilities with the skills to take on conservation leadership roles in their communities, such as managing local conservation projects.</li> <li>• Build capacity for women, youth, and persons with disabilities as conservation ambassadors to lead awareness campaigns in their communities, promoting the value of biodiversity and sustainable practices.</li> <li>• Create a partnership with conservation organisations to offer internships for youth to gain hands-on experience in biodiversity research, wildlife protection, and natural resource management.</li> <li>• Enhance the private sector initiatives to recognise and incentivise women, youth, and persons with disabilities with businesses which are actively involved in both biodiversity conservation and climate mitigation and adaptation projects.</li> </ul>



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## 8. SECTORAL ACTION PLANS

### 8.1 AGRICULTURE SECTOR & FISHERIES

The main strategic objectives of the agriculture sector focus on promoting sustainable agricultural practices that conserve biodiversity and enhance ecosystem services, including:

- 1 Promote sustainable agriculture practices that increase productivity while conserving biodiversity.
- 2 Reduce habitat loss and fragmentation caused by agricultural expansion.
- 3 Minimise pressures on protected areas by enhancing buffer zones and promoting alternative livelihoods.
- 4 Limit the overuse of chemical inputs through the adoption of more resilient crop varieties and the use-efficiency of agro-inputs.
- 5 Strengthen integrated land use planning to balance agricultural needs with biodiversity.
- 6 Enhance sustainable fish production (up to 80,000 tons/year by 2035) with no significant impacts on aquatic biodiversity.

**Table 5: Key Activities, Lead and Collaborating Organisations for the Implementation of Rwanda Updated NBSAP 2025-2030 in the Agriculture Sector.**

No	Key Activity	Lead Organization	Collaborators	Implementation timeline	Reference National target
1	Promote agroecological practices such as crop rotation, agroforestry, and organic farming and expand area under agroecology, conservation agriculture/regenerative agriculture and carbon farming.	MINAGRI	RDB, RAB	2025-2030	5, 7, 10
2	Develop and implement sustainable land management practices to prevent soil erosion and maintain soil fertility (Implement effective soil erosion control measures using nature-based solutions in areas with high erosion risk).	MINAGRI	REMA, RAB, RMB	2024-2028	7, 11
3	Promote the use of organic fertilisers to enhance soil health, reduce chemical runoff, and promote biodiversity conservation in agricultural lands.	MINAGRI	RDB, REMA	2024-2030	5
4	Conduct research on nitrogen use efficiency on major crops and disseminate the findings for practical application in agricultural fields.	RAB, Agricultural Research Organisations	Higher learning Institutions, MINAGRI,	2025-2030	7
5	Mainstreaming biodiversity into Agriculture policy, strategy and plans.	MINAGRI	REMA, RAB	2025-2030	1, 14
6	Implement mitigation measures to decrease levels of fertilisers and pesticides entering wetlands to improve water quality and healthy ecosystems (increase regulations and guidelines of fertiliser and pesticide use in wetlands, leading to improved water quality and healthy ecosystems).	MINAGRI	Ministry of Environment, REMA, RAB, RICA	2025-2030	7

No	Key Activity	Lead Organization	Collaborators	Implementation timeline	Reference National target
7	Provide farmers with training on the safe use, handling and disposal of pesticides to ensure the protection of biodiversity and ecosystems.	RICA	MINAGRI, RAB, RICA, RCA	2025-2030	7
8	Implement a circular economy model for integrated fish and plant production (aquaponics) that reduces the use of chemical fertilisers, enhances resource efficiency, and supports the conservation of aquatic and terrestrial biodiversity.	MINAGRI, RAB	REMA, RAB	2025-2027	10
9	Promote apiculture in appropriate bee reserves (Nyungwe, Gishwati, Mukura, Virunga National Park and Akagera National Park, Ruhande/ Arboretum) away from agricultural activities.	MINAGRI	RDB, RAB	2025-2028	10
10	Promote sustainable production and consumption in the Agriculture sector.	MINAGRI	RAB, REMA, CPCIC	2025-2030	16
11	Develop and implement biosafety measures to ensure safe handling, use, and transfer of genetically modified organisms (GMOs) and biotechnology products in the agriculture sector.	REMA	Ministry of Environment, RAB, FDA, RICA	2025-2027	17
12	Conserve local animals' and plants' genetic resources to preserve biodiversity and maintain ecosystem resilience.	MINAGRI	RAB, REMA	2025-2030	4
13	Promote alternative livelihoods such as agroforestry and other sustainable income-generating activities to reduce pressure on wild species.	MINAGRI	REMA	2025-2030	9

No	Key Activity	Lead Organization	Collaborators	Implementation timeline	Reference National target
14	Enhance Investment in improving livestock sheds and water infrastructure to best implement the zero-grazing policy.	MINAGRI	RAB, RWB	2025-2030	5
15	Strengthen strategies and regulations that promote sustainability in agriculture.	MINAGRI	REMA	2025-2030	10
16	Conduct a study on fish maximum sustainable yield.	RAB	MINAGRI, RWB, REMA	2025-2026	9
17	Adopt best restoration practices that prioritise the preservation and recovery of native threatened fish species.	RAB	RWB, REMA	2025-2030	5
18	Develop and implement guidelines for sustainable management of biodiversity in aquaculture.	RAB	RWB, REMA	2025-2030	
19	Enhance the knowledge and skills of fishers, fish farmers, and other value chain actors in sustainable fishing practices to ensure the conservation of aquatic biodiversity and long-term ecosystem health.	RAB	MINAGRI	2025-2030	5
20	Promote technology for Aquaculture to maintain the native species.	RAB	MINAGRI, RWB	2025-2030	5
21	Identify/develop strategies and guidelines for sustainable consumption/production in the fishery.	RAB	RWB, REMA	2025-2030	16
22	Strengthen strategies and regulations that promote sustainability in aquaculture and fisheries.	RAB	RWB, REMA	2025-2030	10

Note: The private sector will play a collaborative role across all priority actions.

## 8.2 FORESTRY SECTOR

**Table 6: Key Activities, Lead and Collaborating Organisations for the Implementation of Rwanda Updated NBSAP 2025-2030 in the Forestry Sector**

No	Key Activity	Lead Organization	Collaborators	Implementation timeline	Reference National target
1	Maintain and expand the forest cover to more than 30.4% of Rwandan territory.	RFA	Ministry of Environment, REMA, MINAGRI	2025-2030	1, 2, 3, 5, 8.
2	Develop and implement a long-term forest restoration plan (5-year biodiversity restoration plan) prior to highly degraded forest landscapes.	RFA	RDB, REMA	2024-2030	1, 2, 3
3	Increase landscape restoration by at least 300,000ha using nature-based solutions (Agroforestry, progressive terraces and radical terraces with agroforestry, silvo-pastoralism, riverbank protection, gully reclamation, etc.).	RFA, MINAGRI	Ministry of Environment, REMA, RDB	2025-2028	8
4	Manage and maintain forest resources to ensure biodiversity conservation and sustainable provision of ecosystem goods and services.	RFA, RDB	REMA	2025-2030	3, 10
5	Increase research on forest diseases, pests or parasites and set strategies for preventing and controlling them in collaboration with other organs.	RFA	Forestry Research Institutions and Universities	2025-2030	11
6	Strengthen strategies and regulations that promote sustainability in forestry.	RFA	REMA, MoE	2025-2030	10
7	Enhance and provide technical support to local community-based forest management initiatives for improved conservation and sustainable use of forest resources.	RFA	REMA, RDB	2025-2030	1, 3, 4, 5, 8, 9, 10

Note: The private sector will play a collaborative role across all priority actions.

## 8.3 WATER RESOURCES SECTOR

The strategic objective of the water sector emphasises integrated water resource management to maintain ecological integrity and support biodiversity conservation across Rwanda's ecosystems. In this context, it is essential to highlight that the Rwanda Water Resources Board's (RWB) 2021–2030 Strategic Plan includes objectives that align closely with and support this sectoral plan.

Key strategic objectives, such as enhancing water resources governance, preventing and controlling soil erosion, and increasing resilience to flooding and landslides, contribute directly to ecosystem restoration and biodiversity conservation. It is also important to note that the government of Rwanda is placing increasing focus on peatlands in its restoration efforts.

These objectives also strengthen collaboration efforts, facilitating the integration of biodiversity across various sectors to promote a more sustainable and resilient environment.

**Table 7: Key Activities, Lead and Collaborating Organisations for the Implementation of Rwanda Updated NBSAP 2025-2030 in the Water Resources Sector**

No	Key Activity	Lead Organization	Collaborators	Implementation timeline	Reference National target
1	Strengthen wetland management through the establishment of a sustainable eco-park	REMA	REMA, RDB, RWB, MINALOC	2025-2030	2
2	Promote sustainable use of water bodies for economic activities (water resources development) while ensuring the protection of aquatic biodiversity and minimising ecosystem disruption.	RWB	REMA	2025-2030	3, 5
3	Develop and implement guidelines for the sustainable management of biodiversity in aquaculture.	RWB	REMA	2025-2026	5
4	Strengthen lake water parameter monitoring and ecology.	RWB	MINAGRI, REMA	2025-2030	6
5	Support the establishment of aquaparks.	MINAGRI	RDB	2025-2030	5
6	Strengthen rainwater harvesting for erosional control and irrigation.	RWB	MINAGRI	2025-2030	8

No	Key Activity	Lead Organization	Collaborators	Implementation timeline	Reference National target
7	Expand river buffer zones to small rivers and expand sediment retention through grey and green infrastructure.	RWB	MINAGRI	2025-2030	11
8	Maintain and enhance water-related ecosystem services.	RWB	REMA	2025-2030	11
9	Empower local communities to sustainably manage inland water ecosystems through community-based natural resource management.	RWB	REMA, RDB	2025-2026	4

**Note: The private sector will play a collaborative role across all priority actions.**

## 8.4 TOURISM SECTOR

The strategic objective of the tourism sector is to promote sustainable tourism that supports biodiversity conservation and benefits local communities.

**Table 8: Key Activities, Lead and Collaborating Organisations for the Implementation of Rwanda Updated NBSAP 2025-2030 in the Tourism Sector**

No	Key Activity	Lead Organization	Collaborators	Implementation timeline	Reference National target
1	Promote sustainable tourism that supports ecosystem services and local communities.	RDB	REMA	2025-2030	11
2	Identify/develop strategies and guidelines for sustainable consumption/production in the tourism sector.	RDB	REMA	2025-2030	16
3	Identify and implement agro-eco-tourism opportunities that promote biodiversity conservation while supporting sustainable land use.	RDB	REMA, MINAGRI, RAB	2025-2030	5
4	Promote alternative livelihoods such as eco-tourism and other sustainable income-generating activities to reduce pressure on wild species.	RDB	REMA, MINAGRI, RAB	2025-2030	9

**Note: The private sector will play a collaborative role across all priority actions.**

## 8.5 URBANISATION AND RURAL SETTLEMENT DEVELOPMENT SECTOR

**Table 9: Key Activities, Lead and Collaborating Organizations for the Implementation of Rwanda Updated NBSAP 2025-2030 in the Urbanization and rural settlement Development Sector**

No	Key Activity	Lead Organization	Collaborators	Implementation timeline	Reference National target
1	Develop and implement Nature-based Solutions (NbS) plans for cities and towns in line with the existing master plan.	MININFRA	City of Kigali, REMA, MINEMA	2025-2030	12
2	Enhance the establishment of green urban spaces and wetlands in satellite and secondary cities.	MoE	City of Kigali, REMA	2025-2030	12
3	Promote the establishment of new parks, community gardens in urban areas.	MININFRA	City of Kigali, REMA	2025-2030	12
4	Enhance the quality and accessibility of existing green spaces.	MININFRA	City of Kigali	2025-2030	12, 2, 14
5	Promote biodiversity conservation within urban green spaces (e.g., native plant species adapted to urban areas).	MININFRA	City of Kigali, REMA	2025-2030	12; 2, 8, 14
6	Enforcement of river buffer zone protection expands sediment retention through grey and green infrastructure.	MoE	City of Kigali, RWB, REMA	2025-2030	11

## 8.6 INDUSTRIAL SECTOR

No	Key Activity	Lead Organization	Collaborators	Implementation timeline	Reference National target
1	Enhance control of environmental enforcement and compliance in the industrial sector	REMA	Local authorities, RDB, PSF	2026-2030	7, 14, 15
2	Develop an emission factor for industries.	REMA	MoE	2026-2030	7, 14, 15, 21
3	Promote improved waste disposal, including hazardous waste.	REMA	PSF, City and urban area authorities	2026-2030	7, 8, 14, 22
4	Promote recycling and reuse in industry.	REMA	PSF, City and urban area authorities	2026-2030	7, 14, 15, 16
5	Monitor air pollution in industries, and set up automated self-monitoring systems.	REMA	PSF	2026-2030	7, 14, 15, 21
6	Conduct an Inventory of sources of industrial pollution in Rwanda.	REMA	PSF	2026-2027	7, 14, 15, 21



## 9. IMPLEMENTATION FRAMEWORK

### 9.1 OVERVIEW

Successful implementation of the NBSAP requires strategic and concerted efforts at all levels from the local communities, private organisations, non-governmental entities and the national government. Rwanda will ensure that its National Biodiversity Strategy and Action Plan (NBSAP) aligns with the evolving goals and targets of the Kunming-Montreal Global Biodiversity Framework over time.

Rwanda's active and engaged participation in CBD activities ensures that it continues to be updated on key guidance and recommendations for KM GBF implementation. At CBD COP 16 in 2024, Rwanda submitted its national targets aligned with KM GBF and shared its progress in mobilising resources for biodiversity protection. The completion of the NBSAP revision is a step in the nation's efforts to ensure KM GBF alignment. Rwanda is also actively engaging with the recommendations of the Ramsar Convention on Wetlands to scale up its conservation in line with the KM GBF.

To support the implementation of the NBSAP, Rwanda has made notable progress in aligning its national biodiversity policies with the long-term vision of the CBD Kunming-Montreal Global Biodiversity Framework (GBF). One key milestone is the development of the REMA Strategic Plan (2022–2026), which prioritises ecosystem restoration and biodiversity conservation. Key interventions include the establishment of new protected areas, promotion of agroforestry, and restoration of degraded ecosystems over five years. Specific actions encompass the rehabilitation of threatened wetlands, riverbanks, and watersheds, particularly those along the Nyabarongo River and its tributaries.

The plan also emphasises monitoring of ecosystems and biodiversity indicators, enhancing community engagement in restoration efforts, and promoting gender inclusion in conservation activities. Complementing these efforts, the development of the national Conservation Master Plan represents another critical step forward. Moreover, the establishment of Rwanda's National Climate and Nature Finance Strategy aligns directly with the GBF's global goal to mobilise resources for biodiversity conservation, as endorsed at COP 15.

Other relevant sectors have developed specific strategic plans, and are aligned with the NST2. The Government of Rwanda, in NST2, has targeted to raise at least USD 3 billion for climate and nature finance. This will directly support efforts to make key economic sectors biodiversity-friendly and will help the government ensure that key economic sectors, such as agriculture and mining, allocate sufficient funding to biodiversity conservation and sustainable use initiatives in their annual budgets.

The country is already striving to incorporate biodiversity conservation into the strategic planning of sectors like agriculture and infrastructure. The Kigali Masterplan is a blueprint for infrastructure development in the nation's capital. It has a clear forest and biodiversity plan that outlines biodiversity conservation strategies, including identifying protection zones, establishing habitat conservation criteria, biodiversity corridors, and establishing biodiversity parks. The PSTA outlines objectives focused on sustainable land husbandry, crop intensification and climate-smart practices that focus, in part, on increasing soil biodiversity. NST2 targets to mobilise at least USD 3 billion for nature finance to support conservation, which clearly is a pathway for biodiversity conservation.

## 9.2 MOBILISATION OF FINANCIAL RESOURCES

There was insufficient funding for the comprehensive implementation of 2016–2020 NBSAP activities aimed at achieving the set targets. Therefore, it is necessary to design diverse strategies for mobilising financial resources for the effective implementation of the 2025–2030 NBSAP.

The strategic objectives include:

**1**

### SECURE SUSTAINABLE FUNDING SOURCES

Identify and secure diverse and sustainable funding sources to support comprehensive NBSAP implementation.

**2**

### ENHANCE CAPACITY BUILDING AND TECHNICAL SUPPORT

Increase financial support for capacity development initiatives to strengthen the management and monitoring of biodiversity resources.

**3**

### IMPROVE MONITORING AND EVALUATION (M&E) CAPABILITIES

Ensure adequate funding for robust M&E systems to track and adapt biodiversity conservation interventions effectively.

**Table 10 summarises the major activities for coordinated and targeted financial resources mobilisation.**

It is proposed to consolidate biodiversity financing and climate financing. Biodiversity and climate finance refers to local, national, and transnational financing that supports actions to address climate change and biodiversity loss from public, private and alternative sources of finance.

Currently, Rwanda is advancing the role of financing in addressing the climate crisis and tracking climate financing nationally. This will help strengthen the role of finance in addressing the biodiversity and climate crisis through mobilising resources for the consolidated biodiversity and climate finance and tracking them.

**Table 10: Key Activities and Responsible Public Institutions for Mobilisation**

No	Key Activity	Lead Organization	Collaborators	Implementation timeline
1	Create a specialised advocacy and awareness-raising unit within the Rwanda Green Fund (FONERWA) to drive sustainable financing for biodiversity management. This unit will prioritise mobilising resources from a variety of sources, including government budgets, international donors, private sector investments, and philanthropic contributions. Its goal is to ensure a steady and diversified flow of funding to support critical biodiversity conservation initiatives, aligning with national and global sustainability objectives. It is proposed that the MINECOFIN, financial supervisory entities, public development banks, private financial institutions and investors integrate the GBF and NBSAP within their policies and decision-making processes.	RDB	MINECOFIN, MoE, REMA, RDB, CoEB	2025
2	Investigate and implement innovative financing mechanisms, such as biodiversity offsets, payment for ecosystem services (PES), and green bonds, to generate additional funding.	RDB, MoE, REMA	Financial Institutions, REMA.	2025-2026

No	Key Activity	Lead Organization	Collaborators	Implementation timeline
3	Strengthen and attract new partnerships with international donors and development partners to secure long-term financial support for NBSAP activities, including attracting new international/ regional and local donor agencies, conservation NGOs, and the private sector.	Ministry of Environment	International donor agencies, conservation NGOs	2025-2030
4	Avoid duplication and overlap allocation of resources. Allocate resources specifically for the development and implementation of training programs for local communities, government officials, and conservation practitioners.	RDB	CoEB, Training institutions, NGOs, international organisations	2025-2026
5	Increase funding in Biodiversity research and findings dissemination. Strengthen the national biodiversity database (RBIS) and create a national gene bank for biodiversity components.	RDB, MoE, REMA	Higher Learning institutions, CoEB and other Research institutions, NGOs	2025-2030
6	Ensure the monitoring and evaluation (M&E) framework for tracking progress, assessing outcomes, and adapting strategies is well-funded and integrated into all biodiversity and conservation projects.	Ministry of Environment	RDB, research institutions	2025-2030
7	Raise awareness in the financial sector and the real sector on nature-related risks.			
8	Enforce the compliance process of ESG reporting on nature financial disclosures.			
9	Incorporate nature risk issues in the financial sector's own instances for their dissemination.			

### 9.3 CAPACITY DEVELOPMENT

The successful implementation of the National Biodiversity Strategy and Action Plan (NBSAP) in Rwanda is critically dependent on the availability of skilled personnel with expertise in biodiversity conservation. The challenges of inadequately skilled personnel, difficulties in implementing advanced conservation techniques, limited capacity for policy and legal framework development, and insufficient training and capacity-building programs have impeded effective biodiversity management.

The strategic objectives include:

1

### DEVELOP AND ENHANCE SKILLED PERSONNEL

Increase the number of trained professionals with expertise in biodiversity conservation, ecology, and environmental management.

2

### IMPLEMENT ADVANCED CONSERVATION TECHNIQUES

Build technical expertise to effectively apply advanced conservation techniques, such as ecosystem restoration and species reintroduction.

3

### STRENGTHEN CAPACITY FOR POLICY AND LEGAL FRAMEWORK DEVELOPMENT

Improve technical capacity in policy development, environmental law, and governance to integrate biodiversity considerations into national and sectoral policies.

**Table 11: Key Activities to Build Capacity for Implementation of NBSAP 2025-2030.**

No	Key Activity	Lead Organization	Collaborators	Implementation timeline
1	Develop specialised training programs and scholarship opportunities for students and professionals in fields related to biodiversity conservation, such as ecology, environmental management, and conservation science.	REMA	MINIEDUC, higher learning institutions, CoEB, international organisations and the private sector	2025-2030
2	Establish/strengthen centres for professional development in biodiversity conservation, offering courses, workshops, and certifications in relevant technical areas.	Ministry of Education	Ministry of Environment, RDB, training institutions, NGOs	2025-2026
3	Train personnel in advanced ecosystem restoration techniques, including habitat rehabilitation and reforestation. Collaborate with international experts to bring in specialised knowledge and skills.	RDB	International organisations, research institutions	2025
4	Create training programs focused on species reintroduction and wildlife management. Develop partnerships with organisations that have experience in successful species reintroduction projects.	RDB	Conservation NGOs, wildlife research institutions	2025

No	Key Activity	Lead Organization	Collaborators	Implementation timeline
5	Organise training programs for policymakers, legal experts, and conservation practitioners on biodiversity-related policies, environmental law, and governance.	Ministry of Environment	Ministry of Justice, legal experts, NGOs	2025
6	Organise annual Biodiversity Forum as a platform for presenting key achievements, research publications, experience sharing, and engaging the private sector in biodiversity-based investments. The forum will contribute to NBSAP awareness, M&E and resource mobilisation strategy.	REMA	MoE, CoEB, National and international NGO's	2026

## 9.4 COORDINATION STRUCTURE FOR IMPLEMENTATION OF RWANDA'S NBSAP (2025-2030)

Effective implementation of Rwanda's National Biodiversity Strategy and Action Plan (NBSAP), which is aligned with the Kunming-Montreal Global Biodiversity Framework, requires a dedicated and cohesive coordination structure. Such a structure will be responsible for guiding implementation, monitoring, and review processes to achieve the NBSAP objectives. It is proposed to establish a National Biodiversity Coordination and Task Force to serve as a multistakeholder platform for NBSAP implementation.

### Lead Ministries and Agencies

The Ministry of Environment and Rwanda Environment Management Authority (REMA) hold primary responsibilities for biodiversity conservation and management in Rwanda. At the sectoral level, various government bodies share conservation responsibilities, including the MINAGRI, MINECOFIN, MININFRA, RDB, RWB, and RFA.

### Ministry of Environment

- Chairs or oversees coordination platforms such as the National Biodiversity Steering Committee.
- Ensures cooperation across relevant ministries and agencies (e.g., Agriculture, Tourism, Local Government, etc.).
- Endorses national progress reports, including national reports and contributions to the Global Biodiversity Framework.
- Provides overarching policy guidance and coordination for the implementation of the NBSAP.

- Ensures biodiversity issues are integrated into national development plans and sectoral strategies.
- Maintains the national biodiversity database and clearinghouse mechanism.

### **Rwanda Environment Management Authority (REMA)**

- Leads in the implementation, monitoring, and evaluation of the NBSAP and biodiversity-related initiatives.
- Provides technical support and capacity building to local governments, CSOs, and other stakeholders involved in biodiversity conservation.
- Coordinates national biodiversity assessments and ecosystem valuation studies.

### **Research and NGO Involvement**

Research institutions such as the Rwanda Agriculture Board (RAB) and universities actively conduct research and programs on biodiversity documentation and management. National and international NGOs also contribute significantly, implementing action programs and informing biodiversity policies.

### **Implementation Mechanisms**

For NBSAP implementation to be successful, it is critical that it is participatory, cross-sectoral, and inclusive of government agencies, the private sector, and civil society. The key goals of this implementation approach are to (1) catalogue all biodiversity-related initiatives across Rwanda, (2) improve coordination among sectors, (3) share lessons learned, and (4) assess progress toward conservation goals.

Rwanda should establish or enhance a coordination mechanism to ensure the effective implementation of its National Biodiversity Strategy and Action Plan (NBSAP), fully aligned with the Kunming-Montreal Global Biodiversity Framework. This strengthened coordination will be vital for cohesive action, monitoring, and evaluation, supporting Rwanda's biodiversity goals and ensuring integration with broader global biodiversity commitments.



10

## 10. COSTING AND RESOURCE MOBILIZATION

The National Biodiversity Strategy and Action Plan (NBSAP) is a critical policy framework that supports countries in preserving biodiversity while integrating conservation efforts into national development planning. To facilitate its successful execution, costing the NBSAP is crucial for securing financial resources, planning expenditures effectively, and prioritising conservation initiatives.

Rwanda remains significantly dependent on external aid, with foreign grants and loans constituting around 40% of development budgets annually. This dependency extends to biodiversity financing, where external contributions account for 39-72% of total government biodiversity expenditures, averaging 56%. The reliance on foreign aid, coupled with fluctuations in biodiversity funding and limited mainstreaming of biodiversity in the natural resource sector, creates uncertainty in future biodiversity financing and management.

Projections based on high- and low-scenario estimates suggest that by 2024/25, government biodiversity expenditures could range from 13.6 to 28.7 billion RWF, underscoring the uncertainty in financial planning. Given that an average of 56% of government biodiversity spending is through development (project-based) budgets, future funding is largely contingent on government policy decisions unless steps are taken to enhance sustainable financing mechanisms for biodiversity management.

To meet the goals outlined in Rwanda's NBSAP, increased efforts are required to mobilise both domestic and international resources while ensuring their long-term stability. While integrating biodiversity conservation more effectively into national development planning is essential, embedding biodiversity financing into recurrent government programs is equally critical. This approach will help maintain a steady flow of resources despite potential fluctuations in donor support.

NBSAP Costing would help governments and stakeholders understand the financial needs for biodiversity conservation. A well-costed NBSAP attracts support from international donors, private sector investments, and national budgets; ensuring that planned actions align with available financial and technical resources and facilitates tracking of expenditures and impact assessments.

## 10. POTENTIAL FUNDING SOURCES

- 1. National Government Budgets:** Allocating biodiversity conservation funds through sectoral budgets. Over the last years, the Government of Rwanda has played a pivotal role in biodiversity conservation and resource mobilisation through policy development, institutional strengthening, and strategic partnerships. It has mainstreamed biodiversity into national development plans and enacted environmental laws to safeguard ecosystems.

The government has actively mobilised resources from development partners, such as the Global Environment Facility (GEF), UNDP, UNEP, and the World Bank, while also increasing domestic funding for biodiversity programs. Key initiatives include landscape forest restoration, protected area expansion, and community-based conservation efforts, contributing to climate resilience and sustainable natural resource management. Rwanda's Climate and Nature Finance Strategy, recently developed through MINECOFIN, places implementation of the NBSAP.

- 2. Rwanda Green Fund:** The Rwanda Green Fund, as a cross-sectoral financing mechanism supporting environmental and climate change initiatives, including biodiversity conservation, will play a leading role in sourcing and making available financial resources for implementing Rwanda's NBSAP (including both private and public projects). The ongoing development of the Rwanda Green Fund's Biodiversity Facility will provide a vehicle for delivering financial and technical support for biodiversity conservation projects in Rwanda.
- 3. Multilateral and Bilateral Donors:** Multilateral and Bilateral donors are instrumental in ensuring that the successful mobilisation of resources is secured to implement the NBSAP.
  - **The Global Environment Facility (GEF)** has played a pivotal role in supporting Rwanda's environmental and biodiversity conservation efforts. Since Rwanda became a recipient of GEF funding, it has benefited from multiple projects focused on biodiversity conservation, climate change adaptation, sustainable land management, and pollution control.

Key highlights of GEF funding in Rwanda include:

### 1 BIODIVERSITY CONSERVATION:

GEF has financed projects aimed at protecting Rwanda's national parks, restoring degraded ecosystems, and strengthening conservation policies.

### 2 CLIMATE CHANGE MITIGATION AND ADAPTATION:

Funding has supported initiatives to promote climate-resilient agriculture, renewable energy adoption, and adaptation programs benefiting vulnerable communities.

### 3 SUSTAINABLE LAND AND FOREST MANAGEMENT:

GEF funding has facilitated afforestation, reforestation, and land restoration efforts to combat soil degradation and enhance ecosystem services.

### 4 POLLUTION AND WASTE MANAGEMENT:

Projects under GEF have addressed chemical pollution, including the management of persistent organic pollutants and improving waste management systems.

- **The United Nations Development Programme (UNDP)** has played a pivotal role in supporting Rwanda's biodiversity conservation efforts through various initiatives and funding mechanisms.

Key highlights of UNDP funding in Rwanda include:

### 1 BIODIVERSITY FINANCE INITIATIVE (BIOFIN)

Since 2018, UNDP's Biodiversity Finance Initiative (BIOFIN) has been instrumental in addressing Rwanda's biodiversity finance gap. The initiative focuses on integrating biodiversity finance into national strategies and has achieved significant progress in training and implementation. A documentary produced by UNDP Rwanda showcases these efforts and the country's rich natural landscapes.

### 2 RWANDA GREEN FUND (FONERWA)

In collaboration with the Rwandan government, UNDP has been involved in developing a biodiversity window within the Rwanda Green Fund (FONERWA). This facility aims to provide financial and technical support for biodiversity conservation projects in Rwanda. The initiative includes the creation of operational manuals and funding guidelines to attract investors and guide project selection, ultimately contributing to the preservation and enhancement of Rwanda's biodiversity.

### 3 COMMUNITY-BASED CONSERVATION PROGRAMS

UNDP has supported conservation programs that improve the livelihoods of local communities through revenue-sharing and community-based tourism initiatives. These programs have funded community development projects, reduced reliance on natural resources, and transformed residents into conservation allies. A notable outcome is the increase in the mountain gorilla population in Volcanoes National Park from 480 individuals in 2010 to over 1,000 in 2022.

- **The World Bank: WB** has been actively involved in supporting biodiversity conservation initiatives in Rwanda through various projects and collaborations.

Key highlights of WB funding in Rwanda include:

## **1 LANDSCAPE APPROACH TO FOREST RESTORATION AND CONSERVATION PROJECT (2014)**

In 2014, the World Bank, through grants from the Global Environment Facility (GEF) and the Least Developed Countries Fund (LDCF), supported Rwanda's efforts to restore degraded forests. This project aimed to increase tree diversity to improve soil fertility, stabilise slopes, regulate stream flow, and expand resources for local livelihoods.

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## **2 NATURE-BASED SOLUTIONS FOR URBAN WETLANDS**

Kigali, Rwanda's capital, transformed degraded urban wetlands into an ecopark, benefiting nature while bringing economic advantages such as increased land values, recreation, and tourism. This initiative demonstrates the potential of integrating nature-based solutions into urban planning.

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## **3 GEF-8 PROJECT FOR ECOSYSTEM RESTORATION**

A recently approved GEF-8 project focuses on addressing land degradation in key catchments and restoring wetlands and forests in Rwanda's Nyungwe-Ruhango Corridor. This area, bordering Nyungwe National Park, has faced significant degradation, and the project aims to benefit both biodiversity and local communities.

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## **4 CHIMPANZEE CONSERVATION AND ECOSYSTEM RESTORATION PROJECT**

The World Bank is preparing a project to protect endangered chimpanzee populations and restore ecosystems in Rwanda's Nyungwe and Gishwati-Mukura National Parks. The initiative aims to enhance biodiversity and support local livelihoods through sustainable conservation practices.

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## **5 ASSESSMENT OF NATURE-BASED SOLUTIONS IN AFRICA**

In collaboration with the World Resources Institute, the World Bank conducted a comprehensive assessment of nature-based solutions in Sub-Saharan Africa, including Rwanda. The study highlights how such solutions can address challenges like urban flooding, land degradation, and biodiversity loss, emphasising the need for stronger policies and diversified funding. These initiatives underscore the World Bank's commitment to supporting Rwanda's biodiversity conservation efforts through financial assistance, technical expertise, and collaborative projects aimed at sustainable development and ecosystem restoration.

- **Private Sector Contributions:** PSF is key in engaging businesses through corporate social responsibility (CSR) initiatives and impact investments. Rwanda will ensure that existing and other untapped opportunities are explored. Payment for Ecosystem Services (PES) presents an opportunity for generating revenue by valuing and charging for ecosystem services. Rwanda could also explore Green Bonds and Conservation Trust Funds as innovative financial instruments to sustain biodiversity financing.
- **Several international development partners** have been instrumental in supporting Rwanda's biodiversity conservation and ecosystem restoration efforts. The Nordic Development Fund (NDF) has contributed to nature-based solutions and climate resilience projects, particularly focusing on ecosystem services in vulnerable landscapes.
- **The Agence Française de Développement (AFD)** has financed major biodiversity and forest management initiatives, including support to protected areas and sustainable natural resource management.
- **Kreditanstalt für Wiederaufbau (KfW)** has provided substantial funding for the rehabilitation and protection of critical ecosystems, such as Nyungwe National Park, through programs that enhance biodiversity and benefit surrounding communities. UK Aid has supported integrated conservation and livelihood projects, with a focus on mainstreaming biodiversity into broader development planning.
- **The Swedish International Development Cooperation Agency (SIDA)** is currently a key partner in the implementation of the Community-Based Biodiversity Conservation Project (COMBIO), which promotes biodiversity restoration in Eastern Rwanda by linking conservation with climate resilience and community livelihoods. Collectively, these partnerships have strengthened institutional capacity, improved ecosystem health, and advanced Rwanda's commitments under the Kunming–Montreal Global Biodiversity Framework.

It is also important to note that the costing of the National Biodiversity Strategy and Action Plan (NBSAP) is subject to several challenges that may affect the accuracy and reliability of financial projections. Incomplete or unreliable financial data can lead to discrepancies in cost estimates, impacting resource allocation and planning. Additionally, economic uncertainties such as inflation, policy shifts, and market fluctuations may alter budgetary requirements over time, and this would require constant and robust monitoring.

Furthermore, the heavy reliance on international donors poses risks to long-term financial sustainability, as fluctuations in external funding could hinder the consistent implementation of biodiversity conservation measures. Therefore, while this NBSAP costing provides a structured framework for financial planning, it should be interpreted with an understanding of these inherent uncertainties and the need for adaptive financial strategies during its implementation.

The costing summarised below considers past initiatives, government commitments, donor contributions, existing funding mechanisms, ongoing projects, and potential untapped opportunities. It provides a comprehensive financial framework to support biodiversity conservation and sustainable resource management.

**Table 12: NBSAP Summary Costing for National Targets**

NBSAP Targets	Total Cost (\$)	Total Cost (Frw)
<p><b>Target 1</b></p> <p>By 2030, participatory biodiversity-inclusive spatial land use planning and management to ensure biodiversity loss is close to zero</p>	14,000,000.00	15,767,360,000
<p><b>Target 2</b></p> <p>Restore at least 30% of degraded lands and inland water (wetlands, lakes and rivers) by 2030 with a focus on biodiversity hotspots, connectivity and areas critical for ecosystem services.</p>	167,000,000.00	188,082,080,000
<p><b>Target 3</b></p> <p>By 2030, conserve and effectively manage at least 11% of terrestrial and inland water areas through ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures (OECMs) in a manner that respects local communities.</p>	5,200,000.00	5,856,448,000
<p><b>Target 4</b></p> <p>By 2030, enhance conservation measures to improve the conservation status of biodiversity, implement management actions to halt the extinction of threatened species and effectively manage human-wildlife conflict.</p>	26,000,000.00	29,282,240,000
<p><b>Target 5</b></p> <p>By 2030, ensure the sustainable management of wild species on all managed lands (agriculture and forestry) and waters (fisheries) and enforcement against illegal activities to manage the ecosystem as a dynamic system.</p>	1,750,000.00	1,970,920,000
<p><b>Target 6</b></p> <p>By 2030, prevent and control invasive alien species and reduce their rate of establishment by at least 50% to minimise their impact on biodiversity and ecosystem services.</p>	1,050,000.00	1,182,552,000

<p><b>Target 7</b></p> <p>By 2030, reduce all pollutants to levels that are not harmful to biodiversity and ecosystem services through more efficient use and nutrient cycling, reducing the overall risks from pesticides and highly hazardous chemicals.</p>	1,300,000.00	1,464,112,000
<p><b>Target 8</b></p> <p>By 2030, minimise the impacts of climate change on biodiversity and build resilience in Rwanda through nature-based solutions and/or ecosystem-based approaches while reducing negative impacts on biodiversity from climate actions</p>	59,500,000.00	67,011,280,000
<p><b>Target 9</b></p> <p>By 2030, ensure the sustainable management and use of wild species to enhance biodiversity conservation and provide socio-economic benefits to communities in Rwanda.</p>	8,300,000.00	9,347,792,000
<p><b>Target 10</b></p> <p>By 2030, improve sustainable management of areas under agriculture, aquaculture, fisheries, and forestry and ensure integration of biodiversity conservation and sustainable practices to enhance ecosystem health, food security, and livelihoods.</p>	6,500,000.00	7,320,560,000
<p><b>Target 11</b></p> <p>By 2030, restore, maintain, and enhance ecosystem services and nature's contributions to people through nature-based solutions and/or ecosystem-based approaches to improve human well-being, resilience, and sustainable development.</p>	11,900,000.00	13,402,256,000
<p><b>Target 12</b></p> <p>By 2030, increase and improve urban green spaces and ensure biodiversity-inclusive and nature-friendly urban planning in Rwanda, emphasising on native species to enhance human well-being, promote biodiversity, and support sustainable urban development.</p>	33,000,000.00	37,165,920,000
<p><b>Target 13</b></p> <p>By 2030, strengthen effective legal measures and strategies to ensure that the benefits arising from the utilisation of genetic resources and traditional knowledge are shared fairly and equitably.</p>	900,000.00	1,013,616,000

<p><b>Target 14</b></p> <p>By 2030, ensure that biodiversity and its multiple values are integrated into policies, laws, regulations, plans and decision-making processes across all sectors and levels of governance.</p>	700,000.00	788,368,000
<p><b>Target 15</b></p> <p>By 2030, large, transnational businesses and financial institutions operating in Rwanda will assess, disclose, and reduce their biodiversity-related risks and negative impacts, contributing to biodiversity conservation and sustainable development.</p>	750,000.00	844,680,000
<p><b>Target 16</b></p> <p>By 2030, all sectors are equipped and implement strategies to promote sustainable consumption and production among individuals, businesses, and government entities to reduce waste, minimise overconsumption, and support biodiversity conservation.</p>	1,600,000.00	1,801,984,000
<p><b>Target 17</b></p> <p>By 2030, strengthen capacity for implementing biosafety measures and sustainable use of biotechnology products and services.</p>	1,000,000.00	1,126,240,000
<p><b>Target 18</b></p> <p>By 2030, identify and develop measures to reduce harmful incentives and subsidies that negatively impact biodiversity and scale up positive incentives to promote biodiversity conservation and sustainable use in Rwanda.</p>	600,000.00	675,744,000
<p><b>Target 19</b></p> <p>By 2030, mobilise five hundred million USD (500 million USD) from all sources and align financial flows with the conservation and sustainable use of biodiversity in Rwanda.</p>	8,500,000.00	9,573,040,000
<p><b>Target 20</b></p> <p>By 2030, strengthen capacity-building, technology transfer, strengthening scientific research and scientific and technical cooperation to enhance biodiversity conservation and sustainable use.</p>	2,800,000.00	3,153,472,000

<p><b>Target 21</b></p> <p>By 2030, (i) ensure that biodiversity-related data, information, and knowledge are readily available, accessible, and utilised to inform and guide biodiversity conservation and sustainable use; (ii) strengthen communication, awareness-raising, education, and monitoring.</p>	1,300,000.00	1,464,112,000
<p><b>Target 22</b></p> <p>By 2030, ensure that all stakeholders, including women, youth and persons with disabilities, can participate in gender equality and in a responsive manner in biodiversity-related decision-making processes and information respecting traditional knowledge.</p>	1,400,000.00	1,576,736,000
<p><b>TOTAL</b></p>	<p><b>355,050,000.00</b></p>	<p><b>399,871,512,000</b></p>

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