

REPUBLIC OF RWANDA



MINISTRY OF NATURAL RESOURCES

ENVIRONMENT AND NATURAL RESOURCES SECTOR

**ENVIRONMENT AND CLIMATE CHANGE SUB-SECTOR STRATEGIC PLAN
2013/14 - 2017/2018**

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Acronyms and Abbreviations

CDC	Community Development Committee
CBD	UN Convention on Biological Diversity
CPAF	Common Performance Assessment Framework
DFID	UK Department of International Development
EAC	East African Community
EDPRS	Economic Development and Poverty Reduction Strategy
EIA	Environmental Impact Assessment
EICV	Household Living Conditions Survey (French Acronym)
ENR	Environment and Natural Resources
ESD	Education for Sustainable Development
FONERWA	Environment Fund of Rwanda (French acronym)
GDP	Gross Domestic Product
GIS	Geographical Information Systems
GoR	Government of Rwanda
ICT	Information and Communication Technologies
ISAR	Institute of Agronomic Sciences of Rwanda (French acronym)
JAfS	Joint Action Forums
KPIs	Key Performance Indicators
KWAMP	Kirehe Watershed Management Project
MDGs	Millennium Development Goals
MEAs	Multilateral Environmental Agreements
M&E	Monitoring and Evaluation
MINADEF	Ministry of Defence
MINAGRI	Ministry of Agriculture and Animal Resources
MINIRENA	Ministry of Natural Resources
MININFRA	Ministry of Infrastructures
MINECOFIN	Ministry of Finance and Economic Planning
MTEF	Medium Term Expenditure Framework
NAFA	National Forestry Authority
NELSAP	Nile Equatorial Lakes Subsidiary Action Programme
NBSAP	National Biodiversity Strategy and Action Plan
NYEP	Nyabarongo Youth Environment Project
OGMR	Rwanda Geology and Mining Agency (French acronym)
ORTPN	Rwanda Office of Tourism and National Parks
PEI	Poverty and Environment Initiative
PER	Public Expenditure Review
PPMER	Project for the Support of Small and Micro-Enterprises in Rwanda
PRSP	Poverty Reduction Strategy Paper
PSTA	Strategic Plan for the Transformation of Agriculture in Rwanda – Phase II
RDB	Rwanda Development Board
REMA	Rwanda Environment Management Authority
PSF	Private Sector Federation
SEA	Strategic Environmental Assessment

SIDA	Swedish International Development Cooperation Agency
SMEs	Small and Micro Enterprises
SSP	Sector Strategic Plan
SWAp	Sector-Wide Approaches
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

EXECUTIVE SUMMARY

Environmental degradation and climate change have been recognized, at the highest political level, as major barriers to realizing Rwanda's medium and long-term development aspirations. As a result, the Government of Rwanda (GoR) is committed to effectively controlling pollution, conserving biodiversity, and restoring productive ecosystems as well as responding to the challenges of climate change.

The environment and climate change sub-sector lies at the heart of the Economic Development and Poverty Reduction Strategy (EDPRS). A considerable proportion of the country's economy is derived directly and indirectly from environmental resources (Agriculture contribution to GDP is 32% in 2012)¹ More than 85% of the population derive their livelihoods from agriculture². As a country whose population largely depends on the provisioning of natural ecosystems, restoring the ecosystems damaged by many decades of mismanagement and increasing population pressure is an important prerequisite for poverty reduction. As a custodian of sensitive trans-boundary environmental resources, including the Nile and Lake Victoria basin waters, the Mountain Gorilla and other endangered species in the Albertine rift eco-region, Rwanda's pursuit of environmentally sustainable development will have a major impact on regional and international development.

This strategic plan highlights the main priorities and resource requirements for the sub-sector over the next 5 years. It sets out the approach that will enable the sub-sector to effectively contribute to the attainment of EDPRS II objectives, the Millennium Development Goals (MDGs) and Rwanda's Vision 2020. It takes into consideration lessons learned through development and implementation of EDPRS I and will be used to inform the preparation of EDPRS II

In the context of the national priorities and emerging global challenges, this strategic plan has been designed to ensure:

1. Environmental sustainability principles and climate change issues are effectively mainstreamed into all national development policies, programmes, plans and budgets;
2. Rwanda is protected from the effects of climate change by putting in place and implementing appropriate mechanisms for mitigation and adaptation, through mobilization of and collaboration with stakeholders;
3. Pollution management (prevention and control) for sustainable development
4. Research and planning is improved to inform sound decision making on environmental management in support of sustainable development and livelihoods
5. Rwanda has adequate and sustained capacity for effective environmental governance and decentralized service delivery capacity for effective environmental governance and decentralized service delivery;

¹ NISR, GDP Annual Estimates, September 2012

² EICV3, Main Indicators Report

These objectives will be realized in one programme, the outcome of which will be “improved environment management and increased resilience to climate change for sustainable development and livelihoods”. This will be delivered through five outputs, corresponding to the above objectives:

1. Environmental and climate change issues mainstreamed across all development sectors for improved sector performance and productivity
2. Vulnerability to climate change reduced
3. Pollution management ensured for sustainable development
4. Environmental research and planning improved to support sustainable development and livelihoods
5. Environmental governance strengthened

Delivery of these outputs will address the challenges within the sub sector as well as support other economic and social sectors to realize their EDPRS II targets in an environmentally sustainable way.

The implementation of the environment and climate change sub-sector programme will require funding amounting to RWF **32,594,755,830 (USD 54,324,593)**.

Financing is expected to come from the national budget and a sector-budget fund, supplemented by commitments from development partners. Long-term mechanisms for sustainable environment and climate change financing through the implementation of Rwanda’s Environment and Climate Change Fund (FONERWA) are expected to take root during the implementation of this plan.

The implementation of this strategic plan will be spearheaded by Environment and Climate Change sub sector Working Group (ESWG) under the leadership of REMA’s Director General and the UK Department for International Development (DFID). The sector-wide approach (SWAp) is expected to support the implementation by ensuring sound coordination of the Environment and Natural Resources sector programming and financing.

In implementation of the strategy, active participation is expected from decentralized entities as well as non-state stakeholders – particularly NGOs, faith-based organizations and private sector organizations including cooperatives.

CHAPTER 1. INTRODUCTION

“.....There is no escaping the fact that we live off the environment – however, the downside of this dependency is that as a continent, we are extremely vulnerable to sudden changes to the environment – particularly climate change resulting in rising sea levels and the destruction of fragile ecosystems.”

President Paul Kagame, Address to the African Ministers of Finance and Environment, Kigali, May 21, 2009.

“While climate change will affect us all, those in the greatest danger live in the poorest countries or small island nations, with the least resources to protect their people” Kofi Annan, Former UN Secretary General.

This strategic plan is prepared in the context of operationalising the wider strategy of the Environment and Natural Resources Sector, the Economic Development and Poverty Reduction Strategy phase II (EDPRS II) and the long-term Vision 2020. It has drawn from the significant achievements made in this sub-sector, in the recent past.

The plan has been updated through a participatory process, which has included a series of consultative meetings at the Environment and Climate Change sub sector Working Group (ESWG) level. The ESWG is chaired by the Director General of REMA and Co-chaired by the UK Department for International Development (DFID).

The strategic framework for the environment and climate change sub-sector is defined by the political and socioeconomic environment; national medium and long-term development goals, as well as international commitments. This wider context is outlined below.

Although Rwanda is categorized as a poor country, it has made remarkable strides in poverty reduction in recent years. Recent data from the 2011 national household survey (EICV3) shows that the poverty rate (the proportion of the population living below the poverty line) has decreased from 57% in 2005/6 to 45% in 2011. The new target set in Vision 2020 is for a poverty rate of 20% by 2020.

Rwanda successfully emerged from the conflict that climaxed in the 1994 genocide against Tutsis and has embarked on a clear road to economic development but it still faces post-conflict challenges like institutional and human resource capacities, a high socially vulnerable population (absolute poor, widows/widowers, orphans, disabled, landless, people living with HIV/AIDS), and limited infrastructure. The country is also still re-settling returning refugees from neighboring countries.

Rwanda itself is host to more than 55,000 refugees mostly from the Republic of Burundi and Democratic Republic of Congo (DRC). These result in enormous strain on the fuel wood, water, arable land and other resources.

Sustainable management of natural resources is critical for meeting poverty reduction objectives: 26 % of the population doesn't have access to an improved drinking water source and 12% of the population use surface waters (rivers and lakes) for drinking water, exposing them to waterborne diseases and increasing the financial burden on the health sector. Firewood is still the fuel used for cooking by the vast majority (86,3%) of the population.³ This can undermine efforts of afforestation and reforestation undertaken and lead to land degradation due to soil erosion.

CHAPTER 2. OVERVIEW OF THE ENVIRONMENT AND CLIMATE CHANGE SUB-SECTOR

2.1 Policy Context

Millennium Development Goals (MDGs): MDG No.7 (achieving environmental sustainability) and MDG No.1 (alleviating poverty) have significantly influenced Rwanda's environmental agenda over the last 5 years. Three of the most significant targets pursued by Rwanda under MDG 7 are - increasing the proportion of land area covered by forest, increasing access to clean water and sanitation, and improving the lives of slum dwellers.

The National Constitution 2003 - guarantees the right to a clean environment for every citizen and other people living in Rwanda, and imposes on the state and population, the responsibility for keeping the environment clean and pollution-free

Vision 2020: Adopted in 2000, revised in 2012 and informed by challenges and lessons from post-genocide reconstruction, as well as from implementation of EDPRS I, Vision 2020 seeks to transform Rwanda into a knowledge-based, middle income country with per capita GDP of 1240 USD by 2020. The national aspirations in the Vision 2020 that have direct implications for environmental management, include:

- I. transforming from an agrarian economy into a knowledge-based economy. This would imply alleviation of the pressure on arable land; and
- II. reducing the proportion of people earning their livelihoods from agriculture from 80% in 2000 to 50% by 2020

The Seven Year Government Plan (2011-2017)

- The sixth programme of this Government Plan targets sustainable management of environment and natural resources. As regards environment the focus will be on:
- Increasing the climate resilience capacity of the country and engaging in green growth as well as raising awareness on climate change issues,
- Developing the strategic plan for rehabilitation of critical ecosystems and watersheds
- Mainstreaming environment in all sectors

The Economic Development and Poverty Reduction Strategy (EDPRS II): The EDPRS-Rwanda's third comprehensive national strategy for poverty reduction and economic transformation from PRSP focuses on emerging priorities to ensure the achievement of the ambitious targets set out in revised Vision 2020. Those priorities are captured under four thematic areas namely: economic transformation, rural development, productivity and youth employment and accountable governance. The EDPRS II, unlike its predecessor, seeks to enhance cross-governmental and cross-sectoral collaboration in order to effectively address those priorities which are cross-sectoral in nature. Although Environment and Natural Resources sector is under the rural development thematic area, poor management of environment and natural resources and a failure to consider potential future impacts of climate change could seriously undermine Rwanda's ability to achieve other EDPRS II priorities.

The EDPRS has important implications for the environmental agenda from three perspectives:

- a) Economic transformation although fostering structural shift towards less contribution of agriculture to GDP (from 32% to 25% in 2020) and bigger implication of industry and services, implies increased pressure on natural resources- forests; water for energy, recreation, irrigation, construction...; soils, minerals, biodiversity,...; with likelihood of increased waste generation. From the environment perspective, sufficient mechanisms for sustainable utilization of natural resources and pollution control through efficient productive measures and better waste management, have to be put in place;
- b) Environment and climate change linkages with EDPRS could also be created through opportunities for investment in renewable energy that can be foundation for economic transformation and low carbon growth, green private sector investment, improved food security and reduced vulnerability to climate change;
- c) Knowledge generation and application, including information and communication technologies (ICT) will provide opportunities for effective environmental communication and awareness raising; as well as addressing environmental challenges like e-waste management and resource use efficiency (e.g. solar energy).

In line with the Vision 2020, *the National Environment Policy (MINITERE, 2003)* is premised on the principles of: sustainable growth; participation; decentralization; intergenerational equity and fairness; emphasis on prevention; polluter pays; recognition of regional and international environmental inter-connectedness;

The Policy seeks to achieve the following specific objectives, to which this strategic plan is contributing:

- (i) to improve the health and the quality of life for every citizen and promote sustainable socio-economic development through rational management and utilization of resources and environment;
- (ii) to integrate environmental aspects into all the development policies, in planning and in all activities carried out at the national, provincial and local level, with the full participation of the population;

- (iii) to conserve, preserve and restore ecosystems and maintain ecological and systems functioning, which are life supports, particularly the conservation of national biological diversity;
- (iv) optimum utilization of resources and attain a sustainable level of consumption of resources;
- (v) to create awareness among the public to understand and appreciate the relationship between environment and development;
- (vi) to ensure the participation of individuals and the community in the activities for the improvement of environment with special attention to women and the youth;
- (vii) to ensure that the basic needs of today's population are met without jeopardizing the ability of future generations to meet their own needs.

The National Decentralisation Policy 2001 and subsequent adjustments – transferred planning and execution of service delivery from the central to local government levels, leaving the central authorities with the responsibilities for policy formulation, resource mobilization and capacity building support of local levels. It is partly on this basis that recent public sector restructuring has been undertaken;

Integrated development plan (IDP) encourages adoption of holistic and cross-sectoral approaches in planning and development – integrating settlement, agriculture, infrastructure development, environmental protection and good governance. It also focuses on lower levels – the sector (Umurenge) level as the centre of planning and coordination, and the village (Umudugudu) as the target area for intervention. Consequently, the concept of umudugudu (clustered settlement) that was developed into a settlement and re-settlement policy in 1996, is being implemented to, among others, address environment and livelihood challenges of rural development. The EDPRS targets to have at least 50% of the rural population settled in imidugudu.

Environment and natural resources sector strategy (ENR SSP 2009-2013): has identified 8 strategic outcomes, two of which, namely ecosystems rehabilitation, conservation and improved functioning and mainstreaming environmental sustainability principles into all development policies, strategies, and programmes; were implemented by the Environment and Climate change sub-sector during EDPRS I but still of relevance for EDPRS I

A national biodiversity policy has been developed. The policy seeks to address the following issues: improved management of protected areas, conservation of biodiversity outside protected areas; access to genetic resources and benefits sharing; agro-biodiversity; bio-prospecting and biodiversity business; and managing biodiversity knowledge, including from research and indigenous knowledge.

National Green Growth and Climate Resilience Strategy; This vision of Rwanda as regards climate change is to be a developed climate-resilient, low-carbon economy by 2050. The strategy's guiding principles are : (i) Economic Growth and Poverty Reduction; (ii) Good Regional and Global Citizenship; (iii) Sustainability of the Environment and Natural resources; (iv) Gender Equality and Equity and (v) Welfare and Wellness of all citizens in a growing population.

The strategy seeks to achieve the following objectives: (i) Energy security and a Low Carbon energy supply that supports the development of green industry and services; (ii) Sustainable land use and water resource management that results in food security, appropriate urban, development and preservation of biodiversity and ecosystem services and (iii) Social protection and disaster risk reduction that reduces vulnerability to climate change impacts

Programmes of action (Sustainable intensification of small scale farming; Agricultural diversity of market; Sustainable land use management; Integrated Water Resource Management; Low Carbon Energy Grid; Small-scale energy access in rural areas; Disaster Management; Green industry and private sector development; Climate compatible mining; Resilient transport systems; Low carbon urban systems; Ecotourism, conservation and PES; Sustainable forestry, agroforestry and biomass and Climate predictions) and Enabling Pillars (Institutional arrangements; Finance, Capacity Building and Knowledge Management; Technology, Innovation and Infrastructure and Integrated Planning and Data Management) have identified to support implementation of this strategic through big and quick wins approach.

The big wins are large scale economy-wide programmes that will take years to fully implement and the quick wins are immediate actions that can be implemented to begin addressing the Enabling Pillars. Quick wins focus on mainstreaming climate resilience and low carbon development into initiatives that are currently underway:

- (i) Institutional framework through IDP and VUP Umurenge,
- (ii) Finance through FONERWA,
- (iii) Capacity building through TVET,
- (iv) Integrated Planning and Data management, Technology development,
- (v) Knowledge management by establishing an online Climate portal
- (vi) Technology transfer
- (vii) Infrastructure development through implementing resource efficient design in the Special Economic Zone (SEZ) in Kigali

Post conflict environmental assessment report: “Rwanda: From Post-Conflict to Environmentally Sustainable Development

The report suggests priority environmental interventions to support the sustainable development path that Rwanda has engaged in since the 1994 disastrous war and genocide. The priority areas have been identified: (i) ecosystem conservation and rehabilitation to combat poverty, (ii) strengthening the environmental governance and (iii) enhancing and promoting regional environmental cooperation.

Although commendable results were achieved in those areas, a lot remains to be done.

Sub-Regional Frameworks

This strategic plan also aims to strengthen linkages with existing sub-regional frameworks and regional integration activities related to Natural Resources Management implemented by Regional Economic Communities (RECs) and Intergovernmental Organizations (IGOS) such as the East African Community (EAC), the Economic Community of the Great Lakes Countries

(CEPGL) and the International Conference on the Great Lakes Region (ICGLR). This will lead to further dissemination of experiences and good practices among countries in the sub-region.

The EAC policy on climate change is one of the key frameworks that aims at guiding Partner States and other stakeholders on the preparation and implementation of collective measures to address climate change in the sub-region while assuring sustainable social and economic development.

The policy is based on three pillars namely: adaptation, mitigation and climate change research. These pillars will be supported by the following critical capacity building areas; technology development and transfer, finance, education, training and public awareness, information and knowledge management systems.

The National Green Growth and Climate Resilience Strategy preparation was guided by the EAC policy on Climate Change.

Lake Victoria Environment Management Programme, Nile basin Initiative, Kagera Transboundary Agro-Ecosystems management are some of the initiatives in which Rwanda is taking part and meant to sustainably manage mainly the transboundary ecosystems, river basins and resources.

2.2 Overview of Environmental Governance in Rwanda

Despite the critical role played by the environment in Rwanda, a formal environmental governance framework did not evolve until recently. Prior to this, environmental management was fragmented across different pieces of legislation and as small components in different departments, with very few dedicated staff and little budget. The institutional framework for environment and climate change management includes:

- Rwanda Environment Management Authority (REMA), as an overall authority for coordinating and regulating the protection, conservation and management of the environment in Rwanda. REMA is also designated as the National Competent Authority for all international environmental treaties and agreements on environment.
- The Rwanda Development Board through its division in charge of investment implementation provides environmental impact assessment (EIA) advice and ensures compliance, as part of the investor facilitation. In addition, RDB is responsible for wildlife conservation and tourism, having absorbed the former Office in charge of Tourism and National Parks (ORTPN). While this may present new challenges, linking investment and business development could increase appreciation, among the business sector, of the need to conserve and sustainably manage the country's environment and natural heritage.
- At the decentralized level, all Districts have, since 2006, an Environment Officer responsible for integrating environmental issues into District Development Plans, and ensuring those issues are prioritised and addressed by providing technical guidance to relevant District Units. At the local level, environmental committees have been formed, in accordance with the provisions of the Organic Law on Environment (No. 04/2005). These are in addition to the community-based structures set up and trained under

different programmes e.g. watershed management committees (WAMACO) and lake shores and river banks protection cooperatives.

- Outside the domain of the public sector, local civil society is emerging as a reliable partner, notwithstanding the knowledge and skills gaps that characterize most environmental NGOs and CSOs. More than 40 local CSOs are operating in various aspects of environmental management.

2.3. Achievements of the sub sector to-date

A number of achievements have been made at strategic and operational levels over the past six years:

In regards with mainstreaming: Check-lists and indicators to integrate environment in sectoral and district plans were prepared and are accessible. Guidelines for Strategic Environmental Assessment were developed and training provided to a range of stakeholders.

Sectors and Districts technical staff and NGOs have been trained in environmental integration and reporting in addition to other training packages in environmental management such as data collection, management and reporting at local levels. Interns were recruited to support all Districts and ministries/sectors (MINALOC MINAGRI, MININFRA, MINECOFIN, MINICOM, MINIRENA) in integrating national environment and climate change priorities and commitments into sector planning, budgeting and implementation.

Technical support has been provided to other sectors formulating policies and strategies with strong linkages to environment and climate change such as the biomass energy strategy, the habitat strategy and the agriculture sector strategic plan (PSTA II).

Support to MINECOFIN resulted in the 2011/12 Budget Call Circular including guidelines on integrating environment and climate change into other sectors.

The strategy to implement Environmental Education for Sustainable Development (EESD) has been developed and guidelines to infuse EESD in school curriculum were disseminated in the education sector. A set of trainings on EESD have been delivered to decentralized institutions (District environment and education officers), media and civil society organizations; awareness material and training modules have been developed and disseminated and 59 schools have already benefited from new guidelines on greening schools involving environmental clubs set up respectively in 80% and 70% of secondary and primary schools. As part of environmental mainstreaming into Vision 2020 Umurenge Programme (VUP) “green village” was demonstrated to serve as a model of clustered rural settlement (umudugudu) where productivity and improved livelihoods can be enhanced through integrated environmental management.

In climate change, the national green growth & climate resilience strategy was developed and a series of trainings were conducted with a view to raise awareness and build capacity for mainstreaming on climate change issues

Rehabilitation of degraded ecosystems: the Government, in partnership with development partners, has rehabilitated a considerable area of degraded ecosystems. In accordance with the Common Performance Assessment Framework (CPAF), a target was put in place to increase the proportion of protected areas for biodiversity preservation from 8% in 2008 to 10% in 2012. This target has been met: protected areas cover just over 10% of the total national territory.

Since 2008, 2098.4 ha of lakeshores and river banks have been protected and 1106 ha of watersheds were rehabilitated. The interventions vary depending on the nature of the ecosystem.

Outside MINIREMA/REMA budget resources, some programmes have made considerable efforts to rehabilitate ecosystems. These include MINAGRI/Rural Sector Support Programme (RSSP) which is involved in marshland reclamation and hillside terracing and irrigation; the AfDB funded Inland Lake Fisheries Development Project (PAIGELAC) which is protecting lake shores and restocking inland lake fisheries; the Common Development Fund (CDF) which has been involved in radical terracing in hilly districts; and the Community Service Programme (known by its French acronym -TIG) which has constructed more than 5,000 Ha of terraces to address soil erosion challenges.

Improved environmental communication: Environmental information is one of the most effective strategies for environmental stewardship. As mandated by the Organic Law on Environment, Rwanda has already produced two National State of the Environment Reports (SOER) in 2009 and 2011. The second National State of Environment Report produced in 2011 was in form of the Atlas of Rwanda's changing Environment, with focus on implication for climate change resilience.

The establishment of the Rwanda Environmental Information Network (REIN) is a key achievement. It is made of government institutions and NGOs. This network is key in producing National State of the Environment Reports.

Development and application of environmental management tools and instruments: REMA has developed and operationalised tools and instruments for environmental management those include: laws and ministerial orders to operationalize the Organic law; practical tools and specific EIA guidelines; check-lists and indicators to help mainstream environment and climate change issues at sectoral and district levels.

An effective environmental inspection and compliance regime has been put in place, in collaboration with other national agencies like the National Police. To-date, EIA applications have been integrated in investment licensing procedures, financing institutions and local government project development clearances. Environmental regulation and compliance has been integrated into the "RDB One-stop-centre", as part of the investor facilitation initiatives.

Effective engagement with respect to International environmental commitments: Rwanda has ratified all major environmental treaties and agreements and regularly submits reports to the Secretariats of respective conventions. However, national stakeholder engagement and ownership of these international environmental reports (e.g. on climate change, desertification and biodiversity) needs to be improved.

Financing for environment has increased tremendously even though it remains substantially low: in the first year of the PRSP (2003), the budget allocation to the environment sector amounted to 0.2% of the total national public expenditure budget, but had increased almost 10 times to 1.8% in 2008.

In order to improve the national funding levels for investment in environmental sustainability, REMA has initiated the operationalization the National Fund for environment and climate change-FONERWA. Key achievements in that regard includes the development of the law governing the Fund and its gazetting, design of the Fund and its operational manual and advocacy towards potential partners and stakeholders.

The framework for Payments of Ecosystem Services is also under development and is considered as one of the instruments for financing environmental sustainability.

2.4 Major challenges and Lessons learnt

2.4.1. Challenges

- Limited implementation of existing policies, laws and strategies and other support tools including guidelines which undermines effectiveness of environment and climate change mainstreaming
- Limited ownership of environmental sustainability and climate change issues particularly in productive sectors reduces national ability to adopt green economy
- Climate change impacts (Floods, landslides and droughts) pose economic losses compounded by:
 - Loss of lives, damage to property and infrastructures (Roads, bridges, power lines, and public buildings and houses)
 - Soil and fertility losses and scarcity of water resources which adversely impact agricultural productivity
 - Human displacements
 - Potential for rising epidemics
 - Lack of adequate early warning systems
- Inadequate solid and liquid waste management particularly in urban areas which contributes to the spread of water borne diseases and other hygiene related illnesses hence increasing cost for ensuring public health
- Rwanda's rapid economic and sustainable growth is undermined by limited productivity of ecosystems and persistent vulnerability as a result of:
 - Pressure on natural resources such as land, water resources and forestry

- Ecosystem degradation such as steep landscapes that exacerbate soil and fertility losses, land and water management including floods all of which hamper productivity and agricultural production in particular.
- Overdependence on biomass sources - Limitations in harnessing Rwanda's potential renewable alternative energy resources
- Lack of Green Accounting experts at the country level
- Inadequate and unreliable financing for environment and climate change
- Limitations in technical and human capacity in environmental management and climate change in general and particularly in productive sectors which rely on environment and natural resources
- Insufficient research, monitoring and evaluation system to capture comprehensive environment and climate change sector-specific as well as cross sector data and information

2.4.2. Lessons learnt

- **A committed and focused leadership** is paramount in evolving a long-term oriented environmental agenda for sustainable development to overcome the interests for short term livelihood and economic development concerns
- Having good policies and laws in place is not enough, significant efforts are needed to ensure their implementation and enforcement.
- **Sector-wide and cross-sectoral approach** is the appropriate pathway to sustainable institutional capacity development to drive the country towards environmental sustainability for national growth sectors performance and poverty reduction
- **Institutional collaboration** is critical to achieving results, even with limited capacity and resources. Effective enforcement of environmental policy and law, in a short span of five years, has not depended on REMA's efforts alone. It has and will succeed because of excellent collaboration and partnership between different institutions across government, the private and civil society sectors, and support from external development partners.

2.5. Emerging issues since the development of EDPRS I

The drivers of development targets have shifted fundamentally since the launch of the EDPRS. Rwanda's development process in the medium and long-term will be influenced by an emerging set of strategic issues and must be considered in the design and implementation of a new environmental management strategy:

Climate change – despite the fact that Rwanda is already a low carbon economy, the country will be among those most affected by the effects of climate change. Climate variability in Rwanda is already affecting agriculture and food security and natural disasters cause damage to infrastructure and threaten livelihoods; climate change is likely to lead to an increase in average temperature, rainfall and the frequency of extreme weather events, exacerbating these effects

Globalisation and regional integration will intensify the inflow of goods and people into Rwanda, thereby changing the demographics, production and consumption patterns; and stretching the national capacity for effective regulation and policy monitoring. They might also affect the country's competitiveness, unless we develop resilience and the preparedness to utilize the enormous opportunities associated with it, particularly knowledge, technology and markets.

CHAPTER 3. ENVIRONMENT SUB-SECTOR STRATEGY

3.1 Environment sector Vision, Mission and Objectives

The **Vision** of the Environment and Climate Change sub-sector is *"A wealthy, green and prosperous nation, in which environment and natural resources are equitably and sustainably managed to meet current and future development needs"*

The Environment Sub-sector and Climate Change **Mission** is *"to ensure that development is pursued and achieved in a manner that inflicts minimal damage to the environment through appropriate regulation, education and technical support and guidance"*

3.2 Specific Objectives

The overall objective of the sub sector strategic plan is that all development in Rwanda is undertaken in a manner that inflicts minimal damage to the environment, and building resilience to threats posed by climate change for the sustained support to economic, social and cultural development of Rwanda.

Specific objectives to be achieved are to ensure:

1. Environmental sustainability principles and climate change issues are effectively mainstreamed into all national development policies, programmes, plans and budgets;
2. Rwanda is protected from the effects of climate change by putting in place and implementing appropriate mechanisms for mitigation and adaptation, through mobilization of and collaboration with stakeholders;
3. Pollution control and management
4. Research and planning is improved to inform sound decision making on environmental management in support of sustainable development and livelihoods
5. Rwanda has adequate and sustained capacity for effective environmental governance and decentralized service delivery;

3.3 Strategic Outcome and Outputs for the EDPRS II

To achieve the objectives outlined above, the following outcome and outputs are expected in the next 5 years.

Strategic Outcome: Improved environment management and increased resilience to climate change for sustainable development and livelihoods

Outputs

- Environmental and climate change issues mainstreamed across all development sectors for improved sector performance and productivity
- Vulnerability to climate change reduced
- Pollution management ensured for sustainable development
- Environmental research and planning improved for environmental management
- Environmental governance strengthened

3.4. Contribution to EDPRSII

The revised strategic plan will contribute directly or indirectly to the four thematic areas namely economic transformation, rural development, productivity and youth employment and accountable governance.

Rwanda's economy is heavily dependent on its environmental resources. Agriculture, industry, commerce and rural energy requirements place significant demands on natural resources, while the livelihoods of rural communities are shaped by their access and use of them. Accelerating growth in economic sectors will put additional pressure on renewable and non-renewable natural resources.

The agriculture sector is a key stimulus for economic growth, plays a key role in delivering food security objectives and supporting rural livelihoods, yet is highly vulnerable to environmental degradation and climate change as it is strongly reliant on rainfall. Indeed, environmental degradation and climate change effects are the main causes of soil losses and as a consequence, Rwanda loses the capacity to feed 40,000 people per year. Unsustainable use of wetlands for agriculture leads to hydrological imbalances (dry-out and inundation) and affects the effective functioning of ecosystems which are important for maintaining agricultural productivity. Poor management of agricultural inputs (e.g. pesticides, herbicides and fertilizers) causes soil degradation and water pollution, decreasing agricultural productivity and reducing resilience to future environmental shocks.

Rwanda also depends on hydropower for half of its electricity generation, a key driver of economic growth. Poor management of water resources (i.e. wetlands) combined with impacts of climate change has required the government to use diesel generators for national electricity supply at a cost of over US\$ 65,000 per day (in direct fuel inputs only).

Sound management of ecosystems (i.e wetlands and forests) to maintain their ecological functions mainly related to water provision is crucial for hydropower generation.

Infrastructure is a key sector for economic growth but also human well being. Recently Rwanda has lost millions of dollars due to damages to infrastructure caused by climate change/extreme events effects. Implementing adaptation and mitigation measures to reduce those impacts will save costs and ensure sustainability of the sector.

Within the framework of Vision 2020, Rwanda targets to have a private sector-led economy and is actively improving its investment climate to attract foreign investment, however, it will be important to ensure investments are sustainable i.e. not undermining the ecosystems on which it directly or indirectly relies, in order to maintain, and strengthen, the sector's contribution to long term economic growth.

Climate change presents additional risks but also opportunities including:

- Resource efficiency and cleaner production (energy efficiency lighting, energy and water metering, wastewater and other waste products recycling) methods can reduce business risk, directly translate into cost savings and could promote sector growth;
- Investment in nature-based tourism can increase revenues;
- Investment in green technologies which not only contributes to create job opportunities but also supports green economy.

The contribution of this strategic plan to EDPRS is summarized in the following table.

Economic transformation for rapid economic growth	Rural Development	Productivity and youth employment	Accountable governance
Environmental & Climate Change Mainstreaming <ul style="list-style-type: none"> Improved sector performance and productivity 	Environmental & Climate Change Mainstreaming <ul style="list-style-type: none"> Improved sector performance and productivity 	Environmental research & planning improved <ul style="list-style-type: none"> Opportunities for green jobs for youth 	Environmental Governance <ul style="list-style-type: none"> Implementation of environmental laws
Reducing vulnerability to Climate Change <ul style="list-style-type: none"> Saving costs due climate damages to infrastructures, crop production Opportunities for green growth, renewable energy development 	Reducing vulnerability to Climate Change <ul style="list-style-type: none"> Saving costs due climate damages to infrastructures, crop production Opportunities for green growth, renewable energy development 	Reducing vulnerability to Climate Change <ul style="list-style-type: none"> Opportunities for green jobs for youth 	Environmental research & planning improved <ul style="list-style-type: none"> Ensuring preservation of natural capital for intergenerational equity
Environmental research & planning improved <ul style="list-style-type: none"> Generation of information that support sustainable economic growth Creation of opportunities for green growth 	Environmental research & planning improved <ul style="list-style-type: none"> Generation of information that support sustainable rural development options Creation of opportunities for green growth 	Pollution management ensured <ul style="list-style-type: none"> Opportunities of green jobs for youth 	Pollution management ensured <ul style="list-style-type: none"> Ensuring preservation of environment for intergenerational equity

3.4.1 Innovations

This sub sector strategic plan will contribute to the achievement of EDPRS II ambitious goals through the following innovations:

- Integrate innovative approaches and knowledge on technology transfer on irrigation, renewable energy and agro-forestry in TVET
- Develop and implement an incentive structure to award performance in environmental management
- Support the scale up of demonstration on pro-poor integrated environmental management through the VUP and IDP programmes as an innovative approach to green and climate resilient villages (Imidugudu)
- Operationalise FONERWA (Fund for Environment and Climate Change) as a reliable, flexible and sustainable financing for cross-sector environment and climate change financing

The following box provides information on Fund for Environment and Climate Change operationalization and funding mechanisms

FONERWA FUND – Innovative environment and climate financing mechanism.

The FONERWA Environment and Climate Change Fund is a pioneering initiative of the Rwandan Government. The Fund represents a sustainable financing vehicle through which environment and climate change finance is channelled, programmed, disbursed and monitored. As a national Basket Fund and a demand based facility, FONERWA is an instrument to facilitate direct access to international environment and climate finance, as well as to streamline and rationalise external aid and domestic finance. It is a key strategic thrust of GoR in its effort to promote Rwanda as ‘The Greenest Country in the World’.

FONERWA design is based on three considerations: 1) Alignment with the FONERWA Law, 2) Reflection of FONERWA’s national character and identified EDPRS II priorities for environment, climate & development 3) Meeting demonstrated financing needs for environment and climate change projects and programmes that demonstrate high value for money.

FONERWA, through its financing windows, will contribute to three thematic areas of EDPRS as reflected below thereby contributing to 9.4% GDP growth targeted by EDPRS II. It is to be noted that some key investment entry points cut across all thematic areas and they are not exhaustive.

- a. **Stimulating green investments for economic transformation:** The fund will invest in the areas of a. promotion and protection of bio-diversity for eco-tourism b. renewable energy and energy efficient technology both at the household and industrial levels to increase access and outputs respectively c. sustainable mines and quarries for value addition and export d. irrigation technology to increase, diversity and sustain production e. applied and adoptive research aiming at green innovation and market diversification f. cross sectoral integrated planning focusing on eco-friendly urbanisation and rural settlements clustering around economic activities contributing directly to the EDPRS Economic Transformation thematic area.
- b. **Strengthening and sustaining rural development opportunities:** The fund will provide access to finance targeting any initiatives that promotes a. sustainable land management in the rural areas (as well as urban) for on and off farm increase in productivity b. integrated water resource management to increase access of water in rural areas c. sustainable forest management to increase value addition of forest products d. ecosystem rehabilitation to diversity rural income sources e. disaster risk reduction to sustain the benefits of rural growth.
- c. **Accelerating private sector productivity and youth employment creation:** The fund incentivises SMEs, both start ups and mature, to establish enterprises that promotes green schemes (i.e. solar, waste and pollution management) by providing access to at least 20% of its resources. The fund will fast track and priorities private/public projects that demonstrate high value for money by creating sustained employment and transfer of skills opportunities for youth. In addition, FONERWA will facilitate access to finance by the private sector from other multilateral climate funds.

Access to the Fund is open to line ministries and districts, charitable and private entities, including businesses, civil society and research institutions. Sources of finance to support the Fund will initially include bilateral, multilateral and domestic resources, both public and private. The latter contribution of the GoR domestic revenue to capitalise FONERWA is unprecedented among Rwandan operated funds to date.

3.4.2 Environment and Climate Change areas for District Development Plans (DDPs)

In the framework of harmonizing and aligning the Environment and Climate Change Sub Sector Strategic Plan with District Development Plans (DDPs), strategic areas have been identified for the decentralized entities to be considered in the development and implementation of DDPs.

In this line, districts will focus on the rehabilitation of their ecosystem in order to maintain biological biodiversity and ecological functions through the Protection and rehabilitation of degraded lakeshores and river banks, Protection of remnant natural forests, Support to green jobs (ecotourism, nurseries development, handicrafts and green manure production from weeds/invasive species, production of briquettes from domestic solid wastes);

Districts will also ensure that pollution management and enforce environmental regulation for sustainable development through the development and implementation plans for relocation of illegal activities operating in wetlands Enforcement of the environment law (enforce the plastic bags ban, manage unsustainable mining,...); Promote clean technologies such as biogas, improved cooking stoves and Promotion of an appropriate landfill for wastes management in all districts; ensure that vulnerability to climate change reduced precisely by Implementing district specific climate change adaptation measures to increase resilience to climate effects (irrigation, terracing, rain water harvesting, afforestation, agroforestry, sustainable land use,...)

All districts have committed to make sure that environment and climate change issues are mainstreamed across all development sectors at lowest decentralized levels by Mainstreaming environment and climate change into District Development Plans (DDPs) and annual performance contracts (Imihigo), Implementing the school greening initiatives; Implementing environment friendly and climate proof rural settlements (imidugudu) through Integrated Development Programmes (IDPs) and spearheading Support to the environment committees for their effective involvement and contribution to sound environmental management at local levels

3.5 Results chain

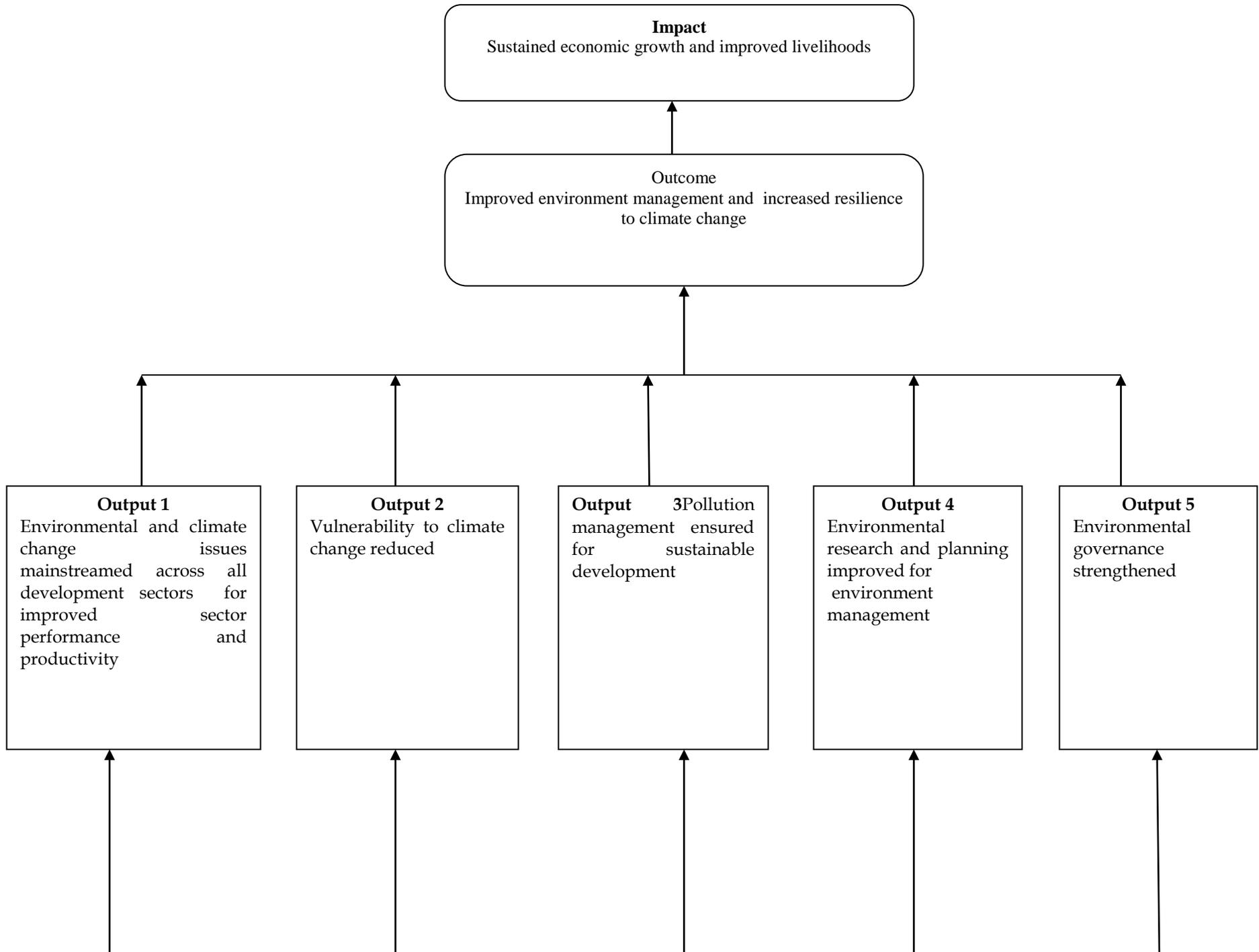
a) Specific objectives and strategies

In order to achieve the mission of the environment and climate change subsector and its objectives different strategies will be used including developing tools and package guidance to facilitate integration of environmental sustainability into socio-economic development processes, building capacity to increase awareness and skills for environmental management, implementing mechanisms and projects to support reduction of vulnerability to climate change, developing legislations and enforcement capacity to ensure compliance with environmental standards and increasing the capacity for evidence based planning. These strategies are summarized in the table below.

Specific objectives	Strategies
Environmental sustainability principles and climate change issues are effectively mainstreamed into all national development policies, programmes, plans and budgets;	<ul style="list-style-type: none"> • Develop tools and package guidance to facilitate integration of environmental sustainability into socio-economic development processes • Build capacity to increase awareness and skills for environmental management • Develop the national capacity for environmental accounting
Rwanda is protected from the effects of climate change by putting in place and implementing appropriate mechanisms for mitigation and adaptation, through mobilization of and collaboration with stakeholders	<ul style="list-style-type: none"> • Develop mechanisms to support implementation of integrated National Green Growth and Climate Resilience Strategy • Develop capacity for early warning systems • and projects to support reduction of vulnerability to climate change
To ensure pollution control & management	<ul style="list-style-type: none"> • Develop tools for pollution prevention and control • Build the capacity for enforcement to ensure compliance to environmental standards
The environmental research and planning is improved to support sustainable development and livelihoods	<ul style="list-style-type: none"> • Increase the capacity for research and evidence based planning • Strengthen the capacity for environmental information management
Rwanda has adequate and sustained capacity for effective environmental governance	<ul style="list-style-type: none"> • Develop the capacity for sustainable financing for the environmental sustainability • Develop and implement the capacity development plan for REMA staff • Develop legislations and regulation for improved environmental management

Various interventions will be undertaken to achieve needed results. These include mainstreaming environment and climate change issues into sectors policies, plans and programmes to improve their productivity and contribution to sustainable development and Rwandans well being, implementing activities meant to reduce sectors and communities vulnerability to climate change, controlling and preventing pollution, improving research and planning to inform sound decision making on environmental management and improving environmental governance.

The results chain is summarized in the following table.



- Integrate Environment, climate change and green growth across all development sectors and sub-national to contribute to national sustainable economic growth ;
- Scale-up local demonstration projects for green and climate resilient settlements (green villages);
- Implement Environmental Education for Sustainable Development
- Support development of green accounting to capture contribution of environment to economic growth

- Implement the Rwanda Green Growth and Climate Resilience strategy through promoting climate resilient small scale agricultural techniques
- Generate spatial and thematic information on Rwanda's climate change vulnerability, including implications for poverty reduction and regional integration;
- Develop capacity for climate change management including disaster preparedness and response, climate change mitigation and change and adaptation, in a sustainable way;
- Public-private partnerships for sustainable financing and management of climate change issues.

- Identify pollution hotspots and development of pollution control plans
- Establish and update the management system of hazardous and toxic substances
- Monitor and control point and non point sources pollution
- Support establishment of centralized sewage systems
- Prevent and control water and air pollution
- Harmonize implementation of policies, regulations and standards developed at regional level for effective management of trans-boundary environmental resources

- Improve the knowledge on biodiversity through research
- Develop capacity for GMOs and related risks assessment
- Develop a comprehensive environmental database including analytical tools to facilitate decision making and putting in place a comprehensive framework for generation, analysis and sharing of information

- Improve the national policy, legal and regulatory framework for Environmental management
- Strengthen the institutional capacity of REMA including capacity needs assessment and development
- Establish the Environment and Climate Change Fund (FONERWA) and support its effective operation

3.6 Cross cutting issues mainstreaming

3.6.1. Gender

Environmental degradation and climate change affect women and men differently. Women and girls traditional responsibilities connect them closely to natural resources as they are the ones who grow food, fetch water and collect fuel wood for household energy needs. Moreover the more they are poor the most they are affected by environmental challenges and climate change impacts such as land degradation, deforestation and forest degradation and droughts, floods to mention but a few.

However they should not be considered as victims only because they possess traditional knowledge, skills and know how that make them key actors in finding solutions to those environmental challenges. That is why it is paramount to assist and empower poor women and men by involving them in decision making, planning and facilitate access to finance, build their capacity to manage the environment sustainably. Women will benefit from environment management trainings at the rate of at least 30% of all beneficiaries. In the ecosystems rehabilitation activities, women will be employed at the rate of at least 30%.

Specifically, this strategic plan will support women through:

- Capacity building on environment and climate change mainstreaming into Women Council plans at central and decentralized levels
- Training of women's cooperatives on environmental management
- Promoting women's environmental initiatives and projects by providing financial support through FONERWA

3.6.2. Regional integration

Regional integration will influence the national environmental governance framework and the choices the country makes for economic transformation. The geographical positioning of Rwanda (as an upstream country of the Lake Victoria and Nile Basins) has brought it to the fore of transboundary ecosystems management, even before the country joined the East African Community (EAC) and COMESA. Increasing economic pressures at the time of escalating ecological crises within the region, have forced countries to look beyond national borders to cooperate and manage these resources jointly. As this intensifies, more resource use conflicts are anticipated. The movement of goods and services within the region will require member countries to harmonise their legislation.

Mainstreaming regional integration in the environment sub sector will be realized through:

- Improving collaborative management of the transboundary natural resources of the Lake Victoria Basin for the shared benefits of the EAC Partner States; and
- Reducing environmental stress in targeted pollution hotspots and selected degraded sub-catchments to improve the livelihoods of communities, who depend on the natural resources of Lake Victoria Basin.

3.6.3. Capacity building

As far as the capacity building in environmental management is concerned, informal education is planned to be offered through trainings and workshops. These will include the trainings in environmental management, pollution control and reducing vulnerability to climate change. In all these trainings, women, youth, people with disability and people with HIV aids will be of focus by mobilizing them especially through their cooperatives and associations.

Within formal education, the Environmental Education for Sustainable Development will be integrated into school and high learning institutions.

This strategic plan recognizes the institutional skills gaps in environmental management. Environmental skills audit as well as the capacity building plan and its implementation are planned for.

CHAPTER 4. IMPLEMENTATION ARRANGEMENTS

4.1 Institutional Roles and Responsibilities

The implementation of this plan extends the borders of institutional responsibility for environmental financing and management from the public body - REMA, to all key stakeholders within the environment sub-sector. Thus, the shared responsibility is described below:

4.1.1 Public Institutions and Agencies

MINIRENA: as the ministry responsible for environment, MINIRENA will provide the overall political direction and policy oversight, guide the preparation of the sector budget and defend it in cabinet, and lead the sub-sector in resource mobilization within the ENR SWAp. MINIRENA will also proactively engage and influence other ministries to make environmentally compliant policies, focusing primarily on those sectors that have a direct bearing on the environment.

REMA, the principal public authority charged with the environmental planning and regulation, will take overall responsibility for coordination and reporting on the implementation of environment and climate change sub-sector activities. Within REMA, the programmes will be coordinated by the relevant departments.

Other ministries and agencies:

- MINECOFIN plays an important coordination/leadership role for environment and climate change financing and management through the Budget Call Circular but also in encouraging other ministries to contribute seed financing to FONERWA, facilitating tracking of Environment and Climate Change budget allocation and expenditure.

- Productive and economic development sectors will be mobilized and engaged to take the lead in ensuring that the environmental resources on which they depend (water, biomass, biodiversity, soil, minerals etc.) are sustainably managed and consistent with environmental sustainability principles. They will also ensure that waste from productive activities is minimized, in accordance with pollution control targets set in this strategy, the ENR strategy and the CPAF (Common Performance Assessment Framework). Key sectors in this category include agriculture; industry and trade; infrastructure; and tourism.
- Social services and social protection institutions will develop policies, programmes and plans to ensure that there are sufficient safety nets and that the population is empowered and equipped with adequate knowledge, information and skills to reduce their vulnerabilities to environment and climate change-related risks. The health sector will scale-up the environmental health programmes and provide sufficient resources to reduce environment-related illnesses, actively participate in the national hygiene and sanitation programmes and include environmental issues into the health management information system (HMIS).
- The education sector will ensure that strategies and resources are in place to integrate environmental education for sustainable development within the formal and non-formal education system at all levels; and ensure that all education infrastructure development plans undergo environmental impact assessments (EIAs).
- **The national disaster management** coordination secretariat will adopt early warning systems that incorporate environmental and climate information into disaster risk prediction and response interventions.
- **Local Government Authorities:** under decentralization, local government authorities have direct responsibility for all decentralized services, including environmental management. With increased local government finance, local authorities will have considerable resources to finance their DDPs and Performance Contracts (Imihigo). The district authorities will be encouraged to prioritise environmental issues, in their planning and budgets given their dependence on environmental resources and vulnerability to environmental and climate change shocks. They will integrate SEA principles into their DDPs and mobilize additional resources to finance environmental investments in their localities. They will, within their capacity limitations, ensure environmental compliance by all development projects in their localities.
- **Public Policy Research and capacity development Institutions:** the National Institute of Statistics (NISR) will integrate environmental questions/ issues into national surveys, censuses and other data collection systems provide technical support in analysis and inference of environmental statistics. Research, training and technology generation institutions (including IPAR, ISAR, NUR, KIST, IRST) will be mobilized, influenced and/ or supported to: identify and pursue research opportunities geared to addressing the environmental and climate change challenges prioritised in the strategy, such as climate change adaptation; tailor their training and capacity development programmes toward providing the needed skills and knowledge in environmental policy management, environmental assessment and technical areas such as genetic engineering, biodiversity conservation and pollution monitoring.

- **Regulatory Institutions:** Rwanda Bureau of Standards (RBS) will work with REMA, the National Police, and other regulatory bodies to ensure that environmental standards are publicized and enforced, at all levels.

4.1.2 Donors and Development Partners

Lead development partners: DFID (the UK Department for International Development) is co-chairing the Environment & Climate Change sub-sector Working Group (ESWG) that has overseen the sub-sector strategic planning process, while SIDA (the Swedish International Development Agency) is co-chairing the ENR sector working group (SWG). These two agencies will be responsible for mobilizing financial support and participation of other multilateral and bilateral development partners. There is also room for envisaging aid in the form of budget support. They will also provide technical support to the implementation process, especially in areas where all development partners already have international commitments like climate change management. UNDP and other UN Agencies involved in the One UN Programme and implementing environmental and natural resources management related activities are also supporting the overall process.

SWAp process should play a critical role in facilitating the alignment of partners to the overall strategy.

Other development partners: will be effectively mobilized to provide technical and financial support to the implementation of the environmental sub-sector strategy, preferably through resource pooling.

Regional Programmes/bodies: In the recent past, there has been limited cooperation between regional organizations and Government agencies. Collaboration has generally been limited to participation in workshops and meetings. Yet trans-boundary programmes like NELSAP, International Gorilla Conservation Programme (IGCP), Lake Victoria Basin Council (LVBC) have responsibility to work with national programmes.

4.1.3 Other Non state actors

Environment CSOs Forum: environmental education, awareness and advocacy are, globally, the domain of civil society. In Rwanda, however, this potential remains to be effectively exploited due, to a large measure, low institutional capacity and coordination weaknesses. There are emerging initiatives to coordinate civil society- through sector-related forums, capacity support and resource allocations. The strategic paradigm shift of development planning towards sector-wide approaches (SWAps) has widened opportunities for civil society in Rwanda to take a lead in environmental management. Civil society is expected to actively participate in advocating, supporting and promoting good environmental practices in industry and trade; community development; and appropriate legislations, among others.

The Private Sector : As the future engine of growth, the private sector has a primary interest in environmental stewardship, especially in Rwanda where most of the development is hinged

on the health and productivity of ecosystems. Businesses are at the centre of resource extraction and their activities generate waste which they must participate in cleaning up. Entrepreneurs' ability and self-drive to identify business opportunities and innovative solutions to many challenges will have to be leveraged to address Rwanda's emerging environmental challenges. An entry point for engaging the private sector has already been created through the Cleaner Production Programme, initiated by REMA, and the space for public-private sector dialogue in EDPRS implementation.

Media: the media has played a crucial role in raising public awareness of environmental issues, identifying and reporting environmental damage. The media in Rwanda can be effective agents of change, especially as mass media (particularly radio) remains the main source of 'authentic' information for the majority of Rwandans. The mass media (print, broadcast, and others) will be effectively mobilized, and empowered with the knowledge, skills and information for effective, accurate and regular environmental reporting.

4.2 Monitoring and Evaluation

Within the limits of the medium-term expenditure framework (MTEF), this strategy will be operationalised by formulating detailed annual, quarterly and monthly work plans. These action plans reflect specific activities to be undertaken in order to generate the desired outputs, in a specific timeframe.

In the context of the EDPRS II, the M&E reporting for the environment and climate change sub-sector will be characterized as being:

- i) Indicator-based i.e. all reports will provide information that enables tracking, assessment, analysis and estimation of progress between reporting periods, towards set targets on selected indicators;
- ii) Accountability-orientated: in the past, reporting was often triggered by demand from higher levels (district from sector; ministry from district; and at central level, from Sector Ministries to MINECOFIN). Lower levels will provide reports not on the basis of demand or request but as a requirement to account for inputs towards improving the state of indicators being monitored.
- iii) Providing a balance between vertical and horizontal communication: One of the major weaknesses in environmental information sharing has been and remains weak horizontal communication. As some of the key indicators to be tracked are poverty/development-environment related, they will be tracked in various sectors. In that regard a two page briefs were prepared for mainstreaming environment and climate changes issues and key indicators to be tracked proposed to eleven sectors (Agriculture, Energy, Transport, Education, Health, Financial sector, Macro-economic planning, Private sector, Social protection, Water and Sanitation and Environment and Natural Resources).

Mid-term evaluation and final evaluation of the sub sector strategic plan implementation will be conducted to evaluate achievement of results and orient future interventions.

Monitoring and Evaluation Framework for Environment and Climate Change Sub Sector

Environment and Climate Change									
Outcome	Outcome indicator	Baseline 2011/12	Target 2013/14	Target 2014/15	Target 2015/16	Target 2016/17	Target 2017/18	Source of verification	Responsible Department/ SPIU project manager
Improved environment management and increased resilience to climate change	Percentage change in vulnerability index of local community in pilot sites.	100% (index:25)			50% (index: 10)			Project completion report	REMA
	Amount of income generated and number of people employed in environment management activities for poverty reduction and social protection (disaggregated by gender)	679,500,000 Rwf	1,260,900,000	2,379,300,000	4,037,700,000	5,796,900,000	7,619,100,000	Annual reports	REMA/LVE MP, DEMP II
	% of projects compliant to EIA conditions	10%	60%	80%	80%	80%	80%	Annual reports	REMA
	% of sectors	Generic	Ministe	30%	60%	90%	100%	SEA	REMA,

	undertaking SEAs and integrating environment and climate change issues in policies, programmes and plans.	SEA guidelines MINAGRI SEA	rial order for all Sectors to do SEA						Reports by all sectors	Concerned sectors
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Output	Output indicator	Baseline 2011/12	Target 2013/14	Target 2014/15	Target 2015/16	Target 2016/17	Target 2017/18		Responsible Department/SPIU
Environmental and climate change issues mainstreamed across all development sectors for improved sector performance and productivity	Number of schools greened	59	110	160	210	260	300	Annual reports	REMA
	Number of environmental committees members trained	6321	7000	7500	8000	8500	9000	Annual reports	REMA
	Number of green and climate resilient village model (umudugudu)	1 site (Rubaya)	2 Sites	3 Sites	4 Sites	5 Sites	6 Sites	Annual reports	REMA
	% of key environment and climate change	2 Districts	10 Districts	15 Districts	20 Districts	25 Districts	30 Districts	Annual reports	REMA MINECOFIN /MINALOC

	issues integrated into District budget and planning								
Vulnerability to Climate Change reduced	Number of CC adaptation and mitigation projects developed	0	5	10	15			Annual reports	REMA
	Number of CC adaptation and mitigation projects implemented	2		3			4	Annual reports	REMA
Pollution management ensured for sustainable development	Area in Ha of wetlands (riverbanks and lakeshores) rehabilitated	2098,4 ha	3067.4 ha	4067.4 ha	4862.4 ha	5030.4 ha	5135.4 ha	Annual reports	REMA LVEMP DEMP II
	Number of entities that comply with resource efficiency and cleaner production regulations	2	4	7	10	13	15	Annual reports	REMA MINICOM PSF RECP
Improved research and planning for environmental management	Research outputs produced to inform policy	2 Reports	3 reports	4 reports		5 reports		Biennial reports	REMA
Environmental governance strengthened	FONERWA spending as a % of expenditure on environmental sustainability, climate	0	5	15	25	40	50	Quarterly reports	MINIRENA FONERWA Secretariat REMA

	change and green growth								
	Number of harmonized environmental regulations and standards at regional level	0	2	5	8	11	13	Annual reports	MINIRENA REMA MINIJUST MINEAC RBS
	Number of environmental legislations/regulations developed and implemented	21	23	25	27	29	31	Annual reports	REMA
	Number of NIP and COP decisions implemented (MEAs)	2	6	12	20	30	42	Annual reports	REMA/ National focal points entities

4.3. Resources and Results Coordination strategy: Sector-Wide Approaches

It is envisaged that this plan will be financed by resources from diverse sources, and implemented by different institutions and actors. Owing from recent experiences of many small short-term projects and inadequate direct funding from Government budget, innovative strategies are needed to mobilizing sufficient resources and effectively coordinate their deployment.

A SWAp (sector-wide Approaches) process is now operating under the strategic leadership of MINIRENA and SIDA. Thus the programming and resource deployment will be through an Environmental sub-sector basket fund.

A major prerequisite for effective sub-sector coordination is to clearly delineate the sub-sector boundaries vis a vis the ENR sector and the wider EDPRS process. Because of its cross-cutting nature, environment is one of the most difficult sectors to define. A wider stakeholder accountability framework that embraces stakeholder interest and responsibility matrix (Annex 3) and the monitoring and evaluation framework above, will guide allocation of responsibilities and tracking of resource use and results.

4.4 Results Management

The Log-frame: The logical framework at Annex 2 provides the framework for monitoring implementation of the strategy and for tracking results. Detailed annual, quarterly and monthly action plans will be designed by the implementing parties based on the broad timelines provided.

Information management: Results management in the environment and climate change sub-sector is, essentially, about managing information. The communication strategy adopted in mobilization, feed-back on outputs and outcomes will embrace the following:

- ***Participatory accountability and Reporting from Sector-wide perspective:*** Joint Sector Reviews (JSRs) are expected to be participatory and reflective of mutual accountability. However, monitoring and reporting on the progress towards EDPRS targets is still largely a government business, with other stakeholders only invited to validate reports. Sufficient mechanisms to make JSRs, Joint Action Forums (JAFs), civil society forums and the Development partners meetings (DPMs) useful forums for stakeholders to share information and hold each other accountable need to be developed and implemented. Detailed Terms of Reference (ToRs) will be developed by the Environment and Climate Change Sub-Sector Working Group to ensure active participation of all stakeholders.

- *Detailed, results-based communication*: Information on the progress towards sub-sector targets will have to go beyond describing what has been done in a given period. Emphasis will be put on progress towards results, lessons learned and innovations adopted to address emerging challenges. Thus, an enriched and analytical reporting framework is anticipated, and considerable resources have been made in the budget to cover all aspects.

4.5. Budget, Financing and Financial Management

4.5.1 Cost structure and costing of Planned Activities

The programme cost over the next 5 years will be an estimated RWF 32,594,755,830 (USD 54,324,593). Allocations by programme outputs and by year are summarized in table 2.

Table 2: Linking budget programmes (MTEF) to sector outputs and costs (Detailed costing in Annex 2)

No	Programme outcome		Total estimates in RWF	Budget allocation									
				2013/2014		2014/2015		2015/2016		2016/2017		2017/2018	
				Current	Dev								
1	Sup-Programme 1 : Environmental and climate change issues mainstreaming	Environmental and climate change issues mainstreamed across all development sectors for improved sector performance and production	4,606,201,886	469,646,000	727,990,250	529,053,113	456,457,626	297,476,750	465,675,000	344,747,463	551,366,250	179,152,372	584,637,063
2	Climate change management	Vulnerability to climate change reduced	9,333,800,000	137,000,000	1,881,200,000	115,000,000	1,328,500,000.00	115,000,000	1,618,100,000	85,000,000.00	2,291,250,000	147,000,000	1,615,750,000
3	Sup-Programme 3: Pollution Management (Prevention and control)	Pollution management ensured for sustainable development	6,447,675,060	559,000,000	1,405,675,000	915,550,060	1,317,250,000	548,000,000	765,200,000	408,000,000	132,000,000	293,000,000	104,000,000
4	Sup-Programme 4: Research & Environmental Planning	Environmental research and planning improved for environmental management	3,171,568,025	117,478,000	220,871,025	129,620,000	106,045,000	100,270,000	1,028,004,000	38,370,000	847,920,000	5,500,000	547,920,000
5	Sup-Programme 5: Environmental governance	Environmental governance strengthened	9,065,080,859	1,099,540,449	1,428,310,829	1,070,990,449	612,895,829	1,037,377,949	602,895,829	1,028,204,824	602,895,829	1,014,073,043	567,895,829
	TOTAL		32,594,755,830	2,382,664,449	5,664,047,104	2,760,213,622	3,821,148,455	2,098,124,699	4,479,874,829	1,904,322,287	4,425,432,079	1,638,725,414	3,420,202,892

4.5.2 Financing Mechanisms

Funding for the implementation of the strategic plan will be mobilized from 3 principle sources:

1) Internal public investment resources: this will entail national budget allocation to the environment vote, through MINIRENA and REMA;

2) On-going project funds – resources from on-going projects will be aligned to relevant outputs and outcomes in the strategic plan and allocated – as part of the programming and financing reform towards programme-based budgeting. The modalities for this review will, however, have to be worked out by the Accounting Officers (MINIRENA/REMA, the financing development partners) and MINECOFIN;

3) External sources mobilized into basket fund: Funding is expected to be mobilized through the Sector Wide Approach. This will be strengthened by partnerships from Environment and Climate Change Sub sector Working Group

4) Non public sector resources: Additional funds are expected – directly and indirectly – from non state intervening agencies – e.g. the international NGOs, faith-based organizations; local NGOs and private sector investments.

5) Cross-sector collaboration: Some of the outputs are expected to be implemented by or in collaboration with other sectors or sub-sectors. For instance, additional funds for ecosystems rehabilitation are expected to come from MINAGRI, the forestry, mining and land sub-sectors, as well as district authorities. Beyond this, the national environment and climate fund (FONERWA), whose establishment is provided for by law, is expected to assist in generating sustainable funding for environment and climate change projects and programmes

Table 3 shows that there is a funding gap of approximately RWF **10,134,034,780** between funding estimates for sub programmes and budget commitments to the sub-sector (both from the budget and projects)

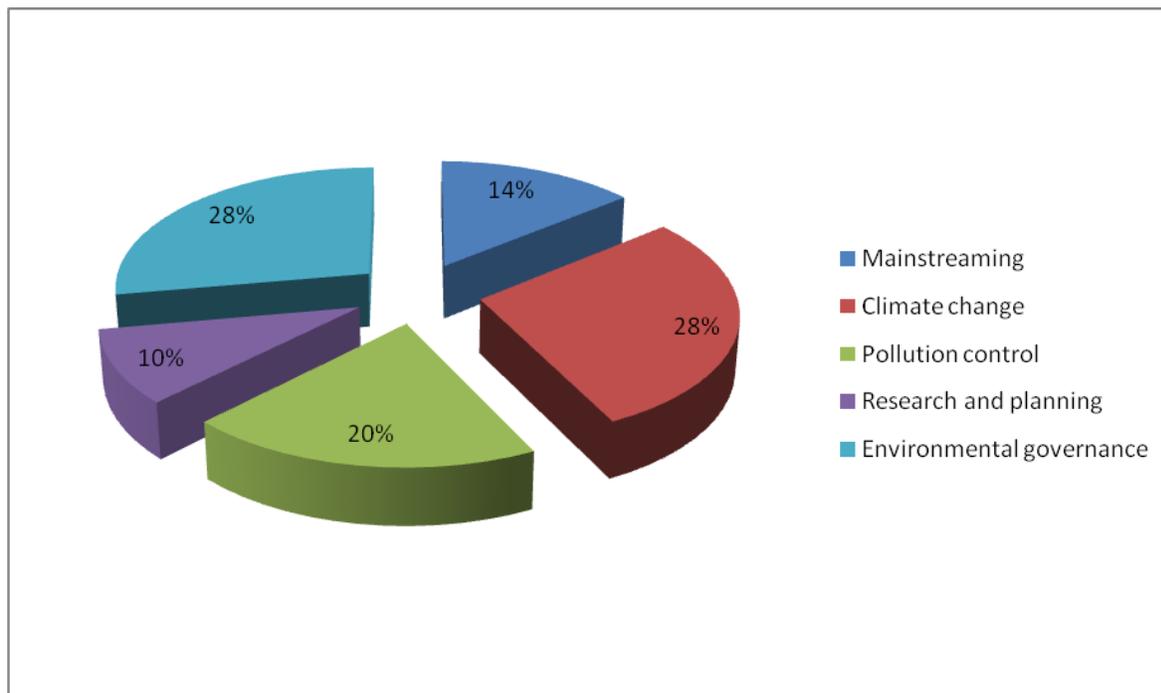
Table 3: Funding Gaps

No	Programme outcome	Total 5 Yrs estimates in RWF	Total funds availability	GAP
1	Environment and climate change mainstreaming	4,606,201,886	3987507834	618,694,052
2	Climate Change management	9,333,800,000	3742153186	5,591,646,814
3	Pollution management (Prevention & Control)	6,447,675,060	1764942924	634,932,648
4	Environmental research and planning	3,171,568,025	3066921999	104,646,026
5	Environmental governance	9,065,080,859	5851395619	3,213,685,240
	TOTAL	32,594,755,830	22,460,721,050	10,134,034,780
	Gap %			31%

4.6. Resource Allocation and Financial Management Arrangements

Resource allocation to the programme components, as indicated in table 1 and figure 3 indicate that the bulk (about 29% of the sub-sector funds) will be spent on environmental governance.

Figure 4: Environment and climate change sub-sector budget allocation by Programme outcome 2013/14-2017/18



Budget allocation and accountability tools:

The main instruments for priority setting, actual financial allocation and accountability will include:

- **Medium term expenditure framework (MTEF)** – a three year rolling plan adopted by the GoR since 2003. The lead agency in the sub-sector – REMA will, along with the parent ministry (MINIRENA), provide technical support and guidance to the environment and climate change sub sector and the wider sub-sector actors within the SWAp.
- **Joint sector reviews (JSRs)** will be conducted on a six monthly basis and will review sector performance based on both the sector log-frame and the annual action plans and budgets;
- **Annual action planning** – will be the basis for priority re-setting and budget allocations with strategic guidance of the MTEF. The annual action plans will be guided by the preceding JSRs.
- **Public expenditure reviews (PERs)** – are mechanisms for tracking the flow and utilization of resources within the sector, and analyzing sector performance based on both the funding and results. They will, hopefully, provide sufficient baselines for setting realistic targets – both for financial mobilization and results.

5. ANNEXES

1. A list of other players involved in the sector
2. The full log-frame
3. The policy matrix for EDPRSII
4. The list of ongoing or planned projects in the sector, covering the period 2013/14-2017/18, together with their estimated budget/financing need and duration.
5. A list of references of documents consulted in drawing up the sector strategy.