

**REPUBLIC OF RWANDA**



**Rwanda Environment  
Management Authority**



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**ENVIRONMENT SUB-SECTOR STRATEGIC PLAN  
2010 - 2015**

Prepared for:  
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**May 2010**

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## Acronyms and Abbreviations

CDC	Community Development Committee
CBD	UN Convention on Biological Diversity
CPAF	Common Performance Assessment Framework
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
MINELA	Ministry of Environment and Lands
MININFRA	Ministry of Infrastructures
MINECOFIN	Ministry of Finance and Economic Planning
MINIRENA	Ministry of Natural Resources
MTEF	Medium Term Expenditure Framework
NAFA	National Forestry Authority
NELSAP	Nile Equatorial Lakes Subsidiary Action Programme
NBSAP	National Biodiversity Strategy and Action Plan
NYEP	National Youth Environment Project
OGMR	Rwanda Geology and Mining Agency
ORTPN	Rwanda Office of Tourism and National Parks
PEI	Poverty -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
RPSF	Rwanda 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**

### ***Introduction and General Context***

Environmental degradation and climate change have been recognized at the highest political level, as some of the main barriers to realizing Rwanda's medium and long-term development aspirations enshrined in the EDPRS and Vision 2020 respectively. This realization has been translated into a resolve of the Government of Rwanda (GoR) to effectively control pollution, conserve biodiversity, and restore productive ecosystems.

This as well puts the environment sub-sector at the centre of the EDPRS, because a considerable proportion of the country's economy (measured by growth domestic product/GDP) is derived directly and indirectly from environmental resources (about 36% from agriculture alone), and more than 80% of the population derive their livelihoods directly from nature.

This strategic plan serves one major purpose – to highlight the main priorities and resource requirements, over the next 5 years, to achieve its contribution to the attainment of the EDPRS, the Millennium Development Goals (MDGs) and the Vision 2020. It is based on and intended to operationalise the eight-programme strategy of the Environment and Natural Resources (ENR SSP) approved earlier on in July 2009.

The strategy has been elaborated at a time when Rwanda, like many other countries in Sub-Saharan Africa, is at cross-roads – of transiting from poor to middle income countries, through the challenges of globalization, in particular, competitiveness and climate change. As a country whose population largely depends on the provisioning of natural ecosystems, restoring the ecosystems damaged by many decades of misrule and the increasing population pressure is an important prerequisite for poverty reduction. It also needs to be appreciated that as a custodian of sensitive trans-boundary environmental resources, such as 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 agenda will have a major impact on regional and international development. This strategic plan comes at an opportune moment, just few months after the UN Climate Change Conference, held in Copenhagen / Denmark. In conclusion to the Conference, leaders of the World underlined that climate change remains one of the greatest challenges of our time and emphasized the strong political will to urgently address this challenge.

### ***Strategic objectives and proposed programmes***

In the context of the national priorities and emerging global challenges, this strategy has been designed to achieve four (4) specific objectives, as follows:

- 1. To ensure that the productive and regulatory functioning of ecosystems in Rwanda is restored, maintained or enhanced by rehabilitating, conserving and sustainably managing all critical ecosystems;*

2. To ensure that 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. To ensure that environmental sustainability principles are effectively mainstreamed into all national development policies, programmes, plans and budgets;

4. To ensure that Rwanda has adequate and sustained capacity for effective environmental governance and decentralized service delivery

5.. To ensure pollution control & management

These objectives will be realized in four programmes, six programme outcomes with a total of 32 outputs, outlined in the summary table 1

Programme	Programme Outcomes	Outputs
1. Ecosystem rehabilitation for income generation	1. Ecosystems rehabilitated, conserved and sustainably managed for effective and sustained provision of ecological, economic and socio-cultural services	1) All ecosystems inventoried and mapped 2) Rehabilitation plans for all critically degraded ecosystems developed 3) Degraded forest ecosystems rehabilitated, conserved and sustainably managed 4) All wetlands conserved for optimal ecological & socio-economic benefits to local, national & trans-boundary communities 5) All River banks and lake shores rehabilitated and protected from degradation 6) Biodiversity outside protected areas assessed (countrywide), mapped and conserved for ecological and socio-economic benefits. 7) All land susceptible to erosion protected & sustainably managed; 8) All critical ecosystems conserved and sustainably managed for socio economic benefits;
2. Climate Change management	2. National Capacity developed for cost-effective & sustainable Climate Change management	1) Climate change related vulnerability monitored to support socio-economic development 2) Integrated National Climate Change management policy and strategy developed and implemented 3) Private sector involvement in climate change management promoted

3. Effective legal, regulatory, policy and institutional framework for Environment Management	3. Environmental issues mainstreamed across all development sectors of the Economy in Rwanda	<ul style="list-style-type: none"> <li>1) Strategy for formal &amp; informal Environmental Education for Sustainable Development (EESD) developed and implemented</li> <li>2) Environmental costs and benefits incorporated into the national income accounts</li> <li>3) Civil society and private sector's participation in environmental management enhanced</li> <li>4) Environmental sustainability principles integrated into education, training &amp; research</li> <li>5) ENR policies &amp; legislative regimes are operational and support equitable and sustainable development</li> <li>6) Environmental issues effectively mainstreamed in/across all key sectors and local development activities</li> </ul>
	4. National capacity for Environmental Information Management developed	<ul style="list-style-type: none"> <li>1) Environmental management information system designed and operationalised</li> <li>2) Environmental scientific research carried out to inform policy decision making &amp; project/programme design</li> <li>3) Rwanda Environmental information network (REIN) operationalized</li> <li>4) An environmental resource centre established and is functional</li> <li>5) Effective communication on the implementation progress for international environmental conventions and protocols;</li> </ul>
	5. Adequate and Sustainable Institutional Capacity developed and effectively utilized for sound environmental management	<ul style="list-style-type: none"> <li>1) National Policy, legal and regulatory framework for Environmental management implemented and enforced</li> <li>2) Institutional capacity for REMA management strengthened</li> <li>3) Institutional capacity of central and decentralized entities, private sector and CSOs for environmental management strengthened</li> <li>4) Adequate environmental administrative, financing framework, financial management established and implemented</li> <li>5) Environmental monitoring &amp; evaluation system in place and operational</li> <li>6) Adequate institutional capacity at the local level to undertake maintenance, conservation &amp; sustainable management of rehabilitated ecosystems developed</li> </ul>
4. Pollution control and management	6. Pollution management ensured and environmental regulations	<ul style="list-style-type: none"> <li>1) Pollution sources and levels assessed</li> <li>2) Management system of the use of hazardous and toxic substances established</li> <li>3) Point and non point sources pollution effectively monitored and controlled</li> </ul>

	enforced for sustainable development	4) Cleaner technologies disseminated and environmental best practices promoted
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These programmes will address the challenges within the sector as well as support other economic and social sectors to realize their EDPRS targets in an environmentally sustainable way.

***Programme financing and Implementation modalities***

The implementation of the environment sub-sector programmes will require funding amounting to Rwf **38,755,142,984 (USD67,991,479)**. The second and third years (2011/12 and 2012/13) will take more funds than other years because of major investments in ecosystem rehabilitation and the fact that the first ever environmental and resource profiles for Rwandan districts and the Kigali city profile will be developed, to facilitate sustainable investments during this period.

Financing is expected essentially from the national budget and a sector-budget fund, top of which considerable commitment from development partners is expected. Long-term mechanisms for sustainable environmental financing are expected to take root during the implementation of this plan.

The implementation framework for the strategy will be markedly different from previous planning and budget implementation processes, because a sector-wide approach (SWAp) mode of programming and financing will be adopted for the Environment and Natural Resources (ENR) sector before the end of 2010. In this regard, an Environment Thematic Working Group (ETWG) has already been formed, under the leadership of REMA Director General and SIDA, and is expected to spearhead the implementation of the Strategic Plan.

The other important aspect to this strategic plan is the expected active participation of the decentralized entities; non-state stakeholders – particularly NGOs, faith-based organizations and private sector organizations including cooperatives.

Finally, it should be emphasized that this planning period is a major landmark in the environmental planning and service delivery. A major change process is therefore expected. A considerable proportion of the budget has, therefore been allocated to institutional and human resources capacity development – both as a fully-fledged programme for national and decentralized level actors, but also embedded within the investment interventions to ensure their sustainability and continuity.

## **1.0 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.

## **1.1 Overview and Context**

This strategic plan is prepared in the context of operationalising the wider strategy of the Environment and Natural Resources sector approved in July 2009, the Economic Development and Poverty Reduction Strategy (EDPRS) and the long-term Vision 2020. It is the first formal, comprehensive medium-term plan of the Environment Sector in Rwanda, but has drawn from the enormous achievements made in the environment sector, in the recent past.

## **1.2 General Background**

The strategic framework for the environment sub-sector is defined by the political and socioeconomic environment; the national medium and long-term development goals, as well as international commitments, reflected in a number of documents:

### **1.2.1 Political and Socioeconomic Environment**

Rwanda, like most of sub-Saharan African countries, is categorized as poor, with 60% of its population living in absolute poverty. Rwanda is ranked 167<sup>th</sup> out of 182 ranked countries on the UN Human Development Index (HDI) for 2009 (UNDP, 2009).

Although the country successfully emerged from the conflict that climaxed in the 1994 genocide of Tutsi and has embarked on a clear road to economic development, 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 resettling returning refugees from neighboring countries.

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

A high proportion of young people (over 65% are under 21), which imposes a huge challenge of investing in social development like health and education, for this to be a resource for future national transformation.

Incomplete rehabilitation of ecosystems and infrastructure destroyed especially in the Tutsi genocide. Post-conflict environmental assessment has recently been undertaken by REMA and UNEP but has yet to result in a clear restoration programme.

A narrow economic base restricted largely to the natural resources endowments (biodiversity, arable lands, water,...) whose exploitation is largely inefficient because of lack of technological know-how.

### 1.2.2 National and International Policy frameworks

1. **Vision 2020:** Adopted in 2000, and informed by challenges and lessons from post-genocide reconstructions, the Vision 2020 seeks to transform Rwanda from a poor country with a per capita income of under USD 250, to a medium income country of per capita GDP of USD 900. 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;
  - ii) Reducing the proportion of people earning their livelihoods from agriculture from 80% in 2000 to 50% by 2020;
2. **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.
3. **The Economic Development and Poverty Reduction Strategy (EDPRS):** The EDPRS- Rwanda's second comprehensive national strategy for poverty reduction and economic transformation is premised on the need to enhance national capacity for sustained poverty reduction and economic development. Hence, the strategic focus of the EDPRS is to expand the economic base. The EDPRS, unlike its predecessor plan, the PRSPI, has a clear focus on pursuing environmentally sustainable development, and with 2 strategic environmental targets i.e. pollution control and biodiversity conservation. Besides the environmental targets, the EDPRS has important implications for the environmental agenda from three perspectives:
  - a. Focus on productive sectors (which absorb about 60% of public expenditure development budget) imply 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. Strategic focus on expanding non agricultural economic and livelihood opportunities. An expanded non-agricultural economic base could (or should) also result in increased funding for environmental management, but this

depends on how well positioned the environment is among the key drivers of economic growth.

- 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 waste management and resource use efficiency (e.g. solar energy).
4. **Integrated development plan (IDP)** of the GoR 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*.
5. **Environment and natural resources sector strategy (ENR SSP)**: has identified 8 strategic outcomes that have to be realized in the next 5 years, viz: sustainable land management; sustainable integrated water resources management; sustainable management of forest and biomass resources; ecosystems rehabilitation, conservation and improved functioning; sustainable mining and mineral exploitation; mainstreaming environmental sustainability principles into all development policies, strategies, and programmes; policy and regulatory framework; and institutional capacity development.  
The environment sub-sector has specific responsibility for 2 of the ENR sector programmes, but will be central to the realization of the other strategic outcomes as well. Hence, this strategy, not only operationalises the ENR strategic plan, but it is also its central pillar.  
This strategy is essentially designed around two ENR sector strategic outcomes – ecosystems rehabilitation; and capacity for environmental and natural resources governance.

#### Sub-Regional Frameworks:

This strategic plan also aims to strengthen linkages with existing sub-regional frameworks and NRM and regional integration related activities 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.

Inputs from NBI, NELSAP, and other sub-regional partners involved in NRM, and management of transboundary ecosystems, river basins and resources.

### **1.3 The Strategic Planning Process**

The design of this strategy has been informed by the Environment and Natural Resources (ENR) sector strategy, under which the environment sub-sector is. The Environment sub-sector strategy has been developed through a participatory process, which has included a series of consultative meetings at the Environment Thematic Working Group (ETWG) level. The ETWG is chaired by the Director General of REMA and Co-chaired by the Swedish International Development Cooperation Agency (SIDA). The Poverty Environment Initiative (PEI) project in REMA provided technical support in drafting the Strategy.

## 2.0 The Environment Sub-sector: Scope and Governance Framework

### 2.1 Definition and Thematic Scope

Environment is a much talked about, less appreciated and hard to define term. The widely accepted definition of Environment is “the totality of the physical, biological and geological phenomena”. In reference to humanity, environment has been defined as all things surrounding us termed in Kinyarwanda as “*Ibidukikije*”.

The organic law on Environment (Law N<sup>o</sup>. 4/2005) defines environment as “.....a diversity of things made up of natural and artificial environment. It includes chemical substances, biodiversity, as well as socio-economic activities, cultural, aesthetic and scientific factors likely to have direct or indirect, immediate or long term effects on the development of an area, biodiversity and on human activities.”

It is simplified by differentiating between the natural environment – which refers to naturally occurring collection of phenomena, and artificial environment, which means that created by human beings e.g. the built environment.

### 2.2 Environment in Rwanda

Environment is very important and sensitive factor in the socioeconomic, political and cultural development of the country, from a number of perspectives:

- Rwanda is naturally endowed with water, biodiversity and landscapes that have shaped the livelihoods, economic and social structure of the country over centuries. These landscapes are, however, fragile and over the years, they have been severely degraded, thereby affecting the quality of livelihoods and economy, and driving migration from rural to urban areas and across borders.
- Secondly, almost all of Rwanda's natural ecosystems transcend international boundaries i.e. they are transboundary. This has placed Rwanda at the centre of geo-political developments/sub-regional initiatives such as in the Nile Basin Initiative, the Lake Victoria Basin Initiative, and RECs/IGOs such as the Economic Community of Great Lakes Countries (CPGEL) and the East African Community (EAC), the International Conference on the Great Lakes Region (ICGLR).
- In the recent past, Rwanda's changing ecosystems and changes in the international markets have informed the strategic shift from traditional export crops such as coffee and tea to include nature-based tourism and high value non traditional exports like metal ores, crafts and horticulture. In this respect, the pristine nature of the environment will determine how Rwanda increases its competitiveness in the global market. This requires a delicate balance between intensified exploitation of ecosystems (such as to explore minerals, generate hydropower and other forms of renewable energy) and limiting ecological disturbance (of soils through organic agro-production, protecting wildlife and biodiversity, conserving forests and wetlands).

The EDPRS priorities, including its two high level indicators – pollution control and biodiversity conservation – is a manifestation of the GoR's commitment to ensuring environmentally sustainable development.

Yet Rwanda's environment has been changing rapidly, as is evident in the extent of land degradation, declining water quality and quantity, increasingly unreliable climate, slums and a growing population of urban poor; and a shortage of wood and biomass resources, among others. These have, evidently affected the quality of life of the population and the economy.

*a) Wetlands and water resources:* a dense fairly evenly distributed drainage network is one of the main natural endowments that sustain Rwanda's economy, and make it an important regional and international water source. With a total of 278,536 Ha of marshlands (10.6% of the country's surface area), close to 150,000 Ha of lakes and 6,462 Km of rivers and streams (SoER 2009), Rwanda is indeed well endowed with water resources. These water resources have generally been utilized naturally with little technological application and limited industrial use until recently. But in the recent past, as land degradation has increased, the pressure on water catchments and watersheds –gallery and hillside forests, wetlands, lake shores and river banks, has increased, which has resulted in reduced quality and quantity of water.

Yet demands for water resources is increasing – as the country's tourism and recreational sectors increase, as irrigated agriculture increases, and as more hydropower development sites are exploited. Since 2003, at least 8,000 Ha of marshlands has been reclaimed for irrigated agriculture, mostly rice, and the PSTA estimates to put an additional 5000 Ha of marshlands. In addition, demand for water for irrigation has increased, as MINAGRI targets to increase area under irrigated agriculture to 20,000 Ha during the EDPRS period.

Wetland degradation has had a complex downward spiral impact onto other development sectors. Perhaps the most compelling story is that of Rugezi wetland whose degradation affected hydro-electric power generation, a situation that exacerbated the economic development process.

*b) Forests and woodlands:* Wood continues to be the main source of energy for the majority of Rwandans, accounting for up to 80.4% (SoER, 2009), yet the supply base has been shrinking even as demand has been rising. The implication is increased pressure on the natural and planted forests which are also required to provide environmental services like climate moderation, carbon sink, and soil stabilization, wind-breaking and as habitat for unique flora and fauna species.

In the last 5 years, the Government has scaled up tree planting programmes, in a bid to raise forest cover to about 30% of the national land area. It has also increased efforts to promote alternative energy sources and improve fuel wood use efficiency. Despite these efforts, gaps in the supply of tree and biomass products remain high, as is the pressure on forest and biomass resources.

*c) Soils and arable land:* land degradation is the biggest environmental threat in Rwanda. Although the total arable land area is estimated at 1.4 million ha (or 52% of the total surface area of Rwanda), the actual area currently under cultivation has exceeded 1.6 million ha, suggesting that arable land in Rwanda is stressed and a considerable amount of agriculture is taking place on unsuitable fragile land. This, to a large extent, explains why land degradation has escalated. Land degradation in fragile landscapes like Rwanda has a huge downwards

spiral that has included sedimentation and water pollution, unemployment and poverty reduction.

In response to declining soil productivity and a shrinking arable land area, the agricultural sector has stepped up use of mineral fertilizers (the % of farmers using mineral fertilizers has increased from 5% in 2002 (MINECOFIN 2001) to about 15% in 2008), and encroached on a sizeable area of wetlands. This has increased the challenges for environmental sustainability in Rwanda.

**d) Biodiversity:** Rwanda is one of Africa's most important biodiversity hotspots – largely occasioned by its location within the Albertine Rift eco-region of the Western rift valley, its diverse terrain and climate variability<sup>1</sup>. Rwanda is home to about 40% of Africa's mammal species (402 species), more than 1000 species of birds, several reptiles and amphibians and some 5,793 species of higher plants (UNDP/GEF, May 2008). About 30% of the global population of Mountain Gorillas is situated in the Rwandan part of the Albertine Rift. Gorilla tourism is the main basis for tourism, an emerging and one of the fastest growing sectors of the Rwandan economy.

However, population pressure and the breakdown of governance systems leading up to the 1994 genocide have inadequate investment in conservation have, over the last several decades, resulted in severe loss of biodiversity. Efforts at conservation and species protection have been revamped with recent projects such as Protected Areas Biodiversity (PAB) Conservation project.

**e) The built environment:** in the aftermath of the 1994 Tutsi genocide, there was huge influx of people and short-term re-settlement programmes were implemented. Since 1997, as stability returned, Rwanda has experienced an upsurge of population (quoted at 8.2 million as per 2002 Population & Housing Census and projected to be 9.6 million in 2008). This, together with increased urbanization (currently at 17%), and unprecedented economic growth have expanded the built environment. The fact that the construction sector is the fastest growing (see MINECOFIN,...) suggests that the built environment is expanding at a high rate, especially in urban areas. The implications for environmental management are varied: huge demand for resources such as water and energy; solid, municipal and sledge waste management; loss of green cover and ecosystem degradation; an increasing number of urban poor; among others. Yet urbanization is an important strategy of the GoR to address increasing challenges of high population density, human settlements and unemployment.

Human settlements are also generally unplanned on both rural and urban areas – only less than 20% of urban population lives in planned neighborhoods. This has escalated the problems of erosion, waste management and frequency of disasters, especially in urban and mountainous rural areas.

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<sup>1</sup> Ranges from more than 2500 metres amsl in the north west to less than 900 metres amsl in the south east; total precipitation under 800 mm in the south east to upwards of 2000 mm in the north.

## 2.3 Environment and Development: The case for environment in the EDPRS

Rwanda's development is interwoven with the quality of its natural environment, The fact that more than 80% of the population directly derive their livelihoods from the environment (agriculture and natural resources); and that the export economy (comprised mainly of coffee, tea and tourism,..) is hinged on natural resource-based primary products, explain this. The environment-development links that manifest clearly in Rwanda, as elsewhere, relate to:

1. *Environment and production*: agriculture, tourism, energy – the main drivers of economic growth and poverty in Rwanda- directly relate to environment, and are sensitive to changes in ecosystem services such as water levels and quality, climate modification, soil fertility, biomass and species diversity, among others. Macroeconomic factors like inflation rates have been linked to drought and food production.

2. *Environment and health*: Health statistics suggest that more than 80% of the ailments reported in health centres are related to environment, mostly water, sanitation and nutrition. These affect the economy through expenditure on health care but also through lost productivity. By addressing environmental issues such as access to clean water, sanitation and a balanced diet, economic productivity can be enhanced.

3. *Environment and natural disasters*: A key function of stable ecosystems is to regulate natural phenomena so as to create a stable environment for production and human habitation. These regulatory functions include purification of water and air, absorption and cleaning of wastes, regulation of water flow and prevention of floods; prevention of drought through macro-climatic moderation; control of erosion and prevention of landslides through soil stabilization; as well as regulation of strong winds, among others. The more ecosystem health has declined, the more natural and human-induced disasters. The cost has come in form of human losses, destruction of property and infrastructure, decline in agricultural production, and increased public expenditure on disaster management. Encroachment on marginal land (semi-arid, wetlands and steep hillsides) that were traditionally protected, has increased and it's mostly the poor that are pushed to these areas. As the poor are often the most vulnerable to such disasters as floods, drought, landslides and epidemics, investing in prevention of such disasters through ecosystem rehabilitation, protection and conservation, has a direct bearing on poverty reduction. Environmental issues in Rwanda are also engendered, considering that women and men relate differently to natural resources, and are affected differently, by environmental calamities like drought, shortage of environmental services like water, fuel wood, productive soil, and waste management. Hence, environmental protection is an important component of the EDPRS and the Vision 2020.

## 2.4 Overview of Environmental Governance in Rwanda

Despite the sensitivity of environment in Rwanda, a formal environmental governance framework did not evolve until recently. Prior to this, environmental management fragmented in different minor pieces of legislations and as small components in different departments e.g. water, forests, wildlife, soil erosion control, etc. The first ever comprehensive policy on environmental conservation and management was formulated by the present Government in 2003, followed by an organic law on environment in 2004. This policy framework clarified the importance and position of environment, and created a more solid institutional framework for environmental management in Rwanda.

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 main institutional structures that provide the tenets for environmental governance in Rwanda are:

1. *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;
2. *The National Decentralization 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;
3. *The National Policy for the protection and conservation of Environment, 2003*: clarifies in detail, the Government priorities and strategies for protection and conservation of the environment in Rwanda, including creation of appropriate institutional framework.
4. The establishment of the 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.
5. *The Rwanda Development Board (Environmental Compliance and cleaner production Unit)* which 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 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.

6. A national biodiversity conservation and management policy has been drafted. When approved, this policy will, *inter alia*, address the following issues: 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.

As part of the operationalisation of the organic law on environment, a number of subsidiary legislations have been enacted.

### 3. Taking Stock: Environment Sub-sector Performance Review

.....so much done, but much more to do...

#### 3.1 Overview of Achievements to-date

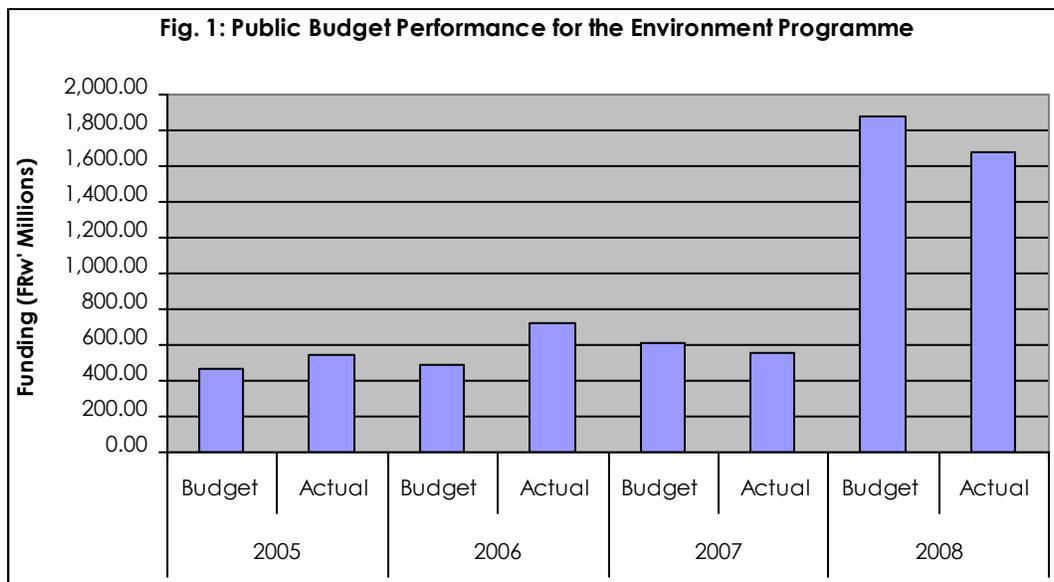
First, it needs to be emphasized that the environment sub-sector has evolved more formally in the last 5 years, having been a small component in various ministries, with hardly any staff or budget. A number of achievements have been made at strategic and operational levels:

**1. Relatively solid and stable environmental institutions have evolved.** Institution here refers to both the formal institutions (laws, policies, organizations, networks,) and informal (behavioral practices, informal groups at various levels of Rwanda. At the formal level, the Rwanda Environment Management Authority (REMA) has established itself as a strong coordination, regulatory, educational, and knowledge organization in Rwanda for all environmental management, in only 3 years. At the decentralized level, all 30 districts have, since 2006, an Environment Officer responsible for ensuring that environmental issues are integrated into the district development plans, and providing technical guidance to district sector units to prioritise and address environmental issues. REMA has provided some technical support to the district environment offices including training and logistical facilities like Computers and Motorcycles. This change in the district personnel establishment that has facilitated decentralized environmental service delivery. At the local level, environmental committees have been formed, in accordance with the provisions of the Organic Law on Environment (No. 04/2005), in addition to the community-based structures set up and trained under different programmes e.g. watershed management committees (with support from the IMCE Project); and Lake shores and River banks protection committees set up with support from DEMP.

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 CBOs. More than 20 local CSOs are operating in various aspects of environmental management – solid waste management; environmental education; soil conservation and water harvesting; public health and sanitation, among others. At the informal level, there is considerable level of environmental consciousness throughout Rwanda, a situation that has resulted in achieving good compliance with limited investment in environmental policing.

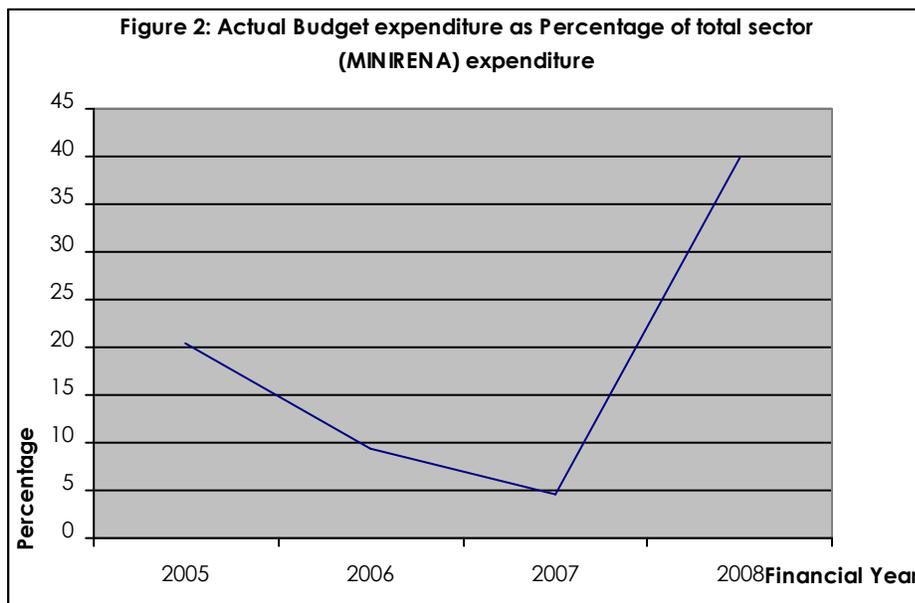
Besides a comprehensive environmental conservation and management policy and Organic Law on Environment (No. 04/2005), a number of subsidiary legislations have been enacted.

**2. 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. Figure 1 shows the trends in budget and actual budget execution for the environmental protection and conservation sub-programme under MINELA.



Data Source: MINECOFIN SMART GoV 2009.

Expenditure on Environmental conservation and protection as a proportion of the natural resources and environment sector, MINELA actual budget (former MINIRENA) has also been changing, as indicated by the graph in figure 2.



Data Source: MINECOFIN SMART GoV 2009.

The suspiciously low percentage in 2007 can be accounted for by the huge increase in institutional transfers as a result of the creation of NAFA (National Forestry Authority) and the National Land centre (NLC) and the sharp increase in the 2008 percentage may be due to the reduction transfer of the Water Supply and Sanitation programme to the Ministry of Infrastructure.

**3. Rehabilitation of degraded ecosystems:** the Government, in partnership with development partners, has rehabilitated a considerable area of degraded ecosystems, investing more than USD 5 million. Under the UNDP/Netherlands funded DEMP (Decentralisation and Environmental Management Project), the GEF/World bank funded IMCE (integrated management of Critical Ecosystems) and other projects, a total of 519Km of river banks, 1350 Ha of lake shores, hilly arable land and wetlands, have been rehabilitated. The interventions are varied from the nature of ecosystem. For critical wetlands i.e. Rugezi, Kamiranzovu, Rweru-Mugesera and Akagera, watershed management plans have been developed, empowering the communities conserve and sustainably manage the ecosystems. A detailed concept paper detailing the case and options for large scale ecosystem rehabilitation has also been developed, creating opportunity for policy discussion and action on large scale ecosystems rehabilitation.

Outside the 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, AfDB funded Inland Lake Fisheries Development Project is protecting lake shores and restocking inland lake fisheries; the Common Development Fund (CDF) has been involved in radical terracing in hilly districts; and the Community Service Programme (known by its French acronym *TIG*) has constructed more than 5,000 Ha of terraces to address soil erosion challenges.

**4. Increased environmental communication:** generation and sharing of environmental information is one of the most effective strategies for environmental stewardship. Rwanda produced its first ever National State of the Environment Report (SOER) in May 2009. The SoER was produced by REMA in partnership with United Nations Environment Programme (UNEP) and the African Development Bank (AfDB)-funded project on Institutional Capacity Building for Environmental Management.

Also, on regular basis, Rwanda prepares and submits national communication reports to the secretariats of international conventions. Nonetheless, national stakeholder engagement and ownership of these international environmental reports (e.g. on climate change, desertification and biodiversity) is still low.

**5. Development and application of environmental management tools and instruments:** Since 2001, Rwanda has experienced an upsurge in infrastructure, tourism, housing and other development domains, all of which have remarkable impact on the environment. Since its inception in 2005, REMA has worked tirelessly hard to develop and operationalise tools and instruments for environmental impact assessment (EIA); organized training and sensitization programmes for various actors; and put in place an effective environmental inspection and compliance regime, in collaboration with other national agencies like the National Police. Such instruments have included EIA guidelines, EIA regulations, training kits, and sector-specific EIA guidelines. To-date, EIA applications have been integrated in investment licensing procedures, financing institutions and local government project development clearances. The environmental regulation and compliance has been integrated into the One-stop-centre, as part of the investor facilitation initiatives.

**6. 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, and participates in international meetings on the implementation of these conventions.

**7. Strategic Policy and planning shift towards sector-wide approaches:** the environment sub-sector institutions, particularly REMA have been at the forefront transforming the sector planning and financing from narrow, institution-based, project-oriented to more holistic, programme-based, sector-wide approaches (SWAp). Whilst still in formative stages, the Environment Thematic Working Group (ETWG) and the ENR SWG have already registered a high turn-up and interest from stakeholder.

#### One UN Programme

Under the One Un, the Common Operational Document specifies how the UN in Rwanda operationalizes its assistance framework, which is the common strategic framework of the UN at the country level. It provides a collective, coherent and integrated UN response to national needs and priorities as outlined in the Rwandan Government's EDPRS and the Vision 2020. The United Nation Assistance Framework in Rwanda is organized around five strategic results, including the Environment and natural resources management. Within this framework, various projects have been funded and they are contributing to the environment management for sustainable development.

### 3.2 Major Challenges Encountered and Key Lessons Learned

While Rwanda's recent efforts in restoring ecosystems integrity and managing environment sustainably, has been hailed at home and abroad as successful, it has been associated with significant challenges which continue to undermine national efforts. The main challenges met include:

1) *Low level of awareness and appreciation* of environmental issues, especially among business sector and farming communities. This increases the cost of enforcement and monitoring, yet EIA and other environmental best practice generally benefits the developers. Partly due to limited appreciation and ownership of environmental issues, there are concerns that some of the recently rehabilitated critical ecosystems may not be sustainably maintained without continued support from the central authorities.

2) *Inadequacies in human resources and institutional capacity* – despite an impressive environmental compliance regime, EIA application and environmental mainstreaming in general, is undermined by inadequate skills, knowledge and resources among practitioners, hence the quality of EIA reports submitted is generally low. Also, the capacity for environmental inspection and compliance monitoring is limited by inadequate staff and logistical facilitation.

3) *Continuous policy and institutional reforms:* the overall institutional environment has not yet sufficiently stabilized to develop appropriate systems and mechanisms for long-term capacity development and retention, as public sector reforms are still on-going since 1997. The resulting high turnover of staff and organizational restructuring tend to undermine efficacy of investments in training and institutional systems development.

4) *Inadequate and unreliable financing* – despite modest increases in budget allocations and donor support, the environment sub-sector remains grossly under-funded. This has limited

prospects of long-term investments in both physical ecosystems protection and institutional capacity development.

5) *Lack of clear framework for monitoring and evaluation (M&E)* including indicators and data sets, makes it difficult to plan effectively, monitor progressively and concretely evaluate performance. M&E was identified as a major limiting factor in the PRSP I implementation and was consequently identified as priority in the EDPRS. It is hoped, however, that the on-going efforts of PEI and AEIN projects, to develop a comprehensive, decentralization-based M&E for the environment sector, will address the challenge of environmental data, monitoring and evaluation.

**A number of lessons have been learned** that will inform Rwanda's future efforts to realize sustainable environmental stewardship. These lessons are as important to Rwanda as to other countries that face similar challenges of addressing poverty, sustainable economic transformation and good governance, in a situation of under-skilled and fast growing population, severely degraded and shrinking natural resource base, changing climate and an increasingly competitive global economy.

**1. Unwavering political will** characterized by committed and focused leadership, is important in evolving an appropriate (i.e. long-term oriented) environmental agenda where there are overwhelming interests for apparently more tangible, politically sensitive, short-term livelihood and economic development concerns. The political environment has also fostered a policy for innovation and reform, which have assisted experimentation of environmental technologies;

**2. Project- based financing** can help achieve quick wins in restoring degraded ecosystems, in demonstrating benefits from good integrated environmental management practices, and in installing short-term capacity. But small, uncoordinated projects are associated with high transaction costs; could erode rather than develop long-term institutional capacity; and cannot support achieving country-wide long-term environmental management goals. This is because funding is usually small, unpredictable and marred by bureaucratic procedures which tend to favour short-term planning. As the road towards vision 2020 becomes clearer, it is important to focus on sector-wide and cross-sectoral environmental planning and developing sustainable institutional capacity to drive the environment sector and the country towards the goal.

**3. Institutional collaboration** is critical to achieving results, even with limited capacity and resources: Effective enforcement of the environmental policy and law (at least with regard to use of polythene materials, EIA compliance, tree planting, pollution, tree planting, etc.), in a short span of less than 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. In a sector-wide planning environment, this collaboration would be stronger because of stepped up synergies.

**4. Environment and development are inextricably inter-linked.** They should not conflict but be mutually reinforcing. Environmental institutions ought to be perceived in positive light – as facilitators rather than detractors of development. This change of perception is often a slow process, requiring multi-dimensional interventions including multi-media sensitization and

demonstration projects such as on cleaner industrial production and integrated farming and rural settlements.

**5. A clear planning framework is a prerequisite for effective sector performance**, efficient resource utilization and coherent sector coordination of environmental service delivery. While a lot has been achieved especially in the last 5 years, the environment sub-sector could have performed much better in mobilizing resources, coordinating stakeholders' efforts and developing more solid capacity, had it had a clear well articulated strategy since 2001.

### 3.3 Sub-sector SWOT Analysis

#### Major Strengths

Rwanda's environment sub-sector does not have large CAPACITY (in terms of complex institutional structures, capable human resources, large pool of logistical facilities, or large local and international network) at least compared to its EAC counterparts or indeed other sectors within Rwanda. But rather its strength is derived from its ABILITY to effectively and consistently focus on the national vision, and efficiently use the resources at its disposal to achieve the desired results. The Environment sector has recently attracted a number of projects addressing various aspects of environmental management, ranging from ecosystems rehabilitation, biodiversity conservation, information systems development and institutional development.

#### Major weaknesses

- Sector and sub-sector coordination is weak, yet the environment has very many stakeholders with often conflicting interests. This results in duplication of effort, waste of resources and low efficacy of interventions;
- Absence of a clear strategy for long-term environmental financing, limits sub-sector planning to short term, soft interventions;
- Lack of expertise and low skill levels environmental institutions, coupled with absence of a long-term capacity development strategy;
- Evolving institutional structures limits sub-sector performance including in resource mobilisation;
- Inadequate capacity of civil society slows down implementation of environmental management programmes.

#### External barriers/ limitations:

The main external limitations to realizing the environmental objectives relate to:

- *Adequate and reliable financing*: dependency on small, unreliable donor projects is a major draw-back to realizing the expected environmental outcomes.
- *Globalization and regional integration*: Rwanda's accession to the EAC, COMESA and renewed participation in the CEPGL, among others, will bring enormous challenges in as much as there are enormous opportunities. Opening the borders imply extra effort in internal regulation to ensure that pollutants of any form do not enter Rwanda. Secondly, there are challenges of legislative contradictions among EAC countries e.g. Rwanda's ban on polythene materials is being challenged elsewhere in its EAC

neighbours and interested parties could put pressure on the GoR to repeal it. Providing leadership in environmental stewardship in the larger EAC is a huge expectation that Rwanda's environmental governance has to provide.

- *Low levels of literacy* among the Rwanda population might undermine efforts at raising environmental awareness, especially relating to complex subjects like climate change and technology adoption. The EICV 2006 reported that only 40% of the population can read or write in any language.
- *limited appreciation by other sectors* of their roles in environmental management imposes a huge burden on REMA and a few environmental institutions;
- *Rapidly changing institutional environment*: Building solid and sustainable capacity and ensuring solid institutional memory in a fast changing public sector institutional framework has been and continues to be a serious bottleneck for the growth and performance of the environment sub-sector.

**Some Innovative strategies to overcome barriers** and enhance opportunities for sustainable environmental management will entail:

- ✓ *Enhanced technological applications*: use of existing tele-centres and the ICT infrastructure being developed; environmental information systems
- ✓ *Partnership building*: with local government authorities; civil society; media; community initiatives; regional and international environmental institutions;
- ✓ Multi-media:
- ✓ Safeguards and proactive negotiation in regional integration
- ✓ Environmental financing arrangements. The recent initiative at REMA to develop the National Environment Fund (FONERWA) could, if operationalised, result in adequate and more predictable funding for environment.

### **3.4 Emerging Strategic Issues for Environmental Management Strategy**

The drivers of development targets have shifted fundamentally since the launch of the EDPRS. Rwanda's development process in the medium (EDPRS) and long-term (Vision 2020) period 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:

**1. Climate change** – despite the fact that Rwanda is a low carbon economy, the country will be among those most affected by the effects of climate change. Climate change vulnerability in Rwanda has already been experienced in the areas of agriculture and food security; renewable energy; frequency of natural disasters and epidemics, among others.

**2. Globalization** will intensify inflow of goods and people, into Rwanda, thereby changing the demographics, production and consumption patterns; and stretching the national capacity towards effective regulation and policy monitoring. Globalization might 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, among other opportunities.

**3. 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<sup>2</sup>, more resource use conflicts are anticipated as more efforts and conflict resolution, which will require all countries to review their national legislations and policies to accommodate transboundary issues. Being an upstream country, Rwanda shares most of its ecosystems with neighbours. The movement of goods and services within the region will inevitably require member countries to harmonize their legislations. Reconciling different national interests in the context of regional integration is likely to be a major challenge, for which Rwanda has to acquire the necessary skills and knowledge.

**4. Addressing national population and human settlement challenges:** Although Rwanda's population growth rate has slowed down in the recent past (from 3% per annum in 2003 to 2.6% in 2008), population explosion continues to be a development challenge in Rwanda. The implication of the high population growth and demographic imbalance on environment, manifest mainly in the enormous pressure exerted on arable land and natural resources beyond the carrying capacities, pollution and congestion, and waste management.

**5. Restoring degraded ecosystems and combating environmental degradation:** the post-Tutsi genocide Government of National Unity (GNU) inherited a huge ecological debt with almost all productive and protective ecosystems severely degraded. This has been further aggravated by enormous influx of people who were resettled in unplanned areas during the humanitarian period; and the lack of adequate appropriate institutions for environmental governance. A lot of progress has been undertaken in establishing the institutional structures and attempts have been made to rehabilitate some of the critical ecosystems through a range of activities. Nonetheless, the challenge remains and will require a large scale rehabilitation programme.

From another perspective, it needs to be emphasized that ecosystem sustainability will not be guaranteed by any measure of ecosystem rehabilitation but rather by putting in place sufficient mechanisms for maintaining an optimal ecological-economic balance.

Thus the current environment sector strategy is designed to operationalise the wider environment and natural resources sector strategic plan (ENR SSP). It will respond to the following influencing factors:

- 1) Economic productivity-driven growth path, as reflected in the EDPRS. The EDPRS has driven the national development agenda towards greater resource use – in agriculture, energy, industry, mining, and trade. This will be driven by the private sector with GoR playing a facilitating and regulatory role;
- 2) Safely embracing globalization, including climate change management
- 3) Changing development cooperation strategy, in light of the Paris Principles that require donors to make their aid predictable, harmonize their country support and align with national development priorities;

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<sup>2</sup> The Nile basin, which has, since 1999, existed as a loose body of 11 riparian countries, is expected to graduate into a permanent commission. The EAC's Lake Victoria Basin Commission is also being strengthened to be a permanent organ responsible for sustainable Economic development in the Lake Victoria Basin.

- 4) Changing demography and population dynamics. The challenges that relate to environmental management in this regard, include a) increasing population growth; b) rural-urban migration; c) changing consumption habits;
- 5) Rapid urbanization, which is changing consumption and utilization of water, energy and other resources, generating waste and increasing demand for resources.

## 4.0 Future Outlook: Environment Sub-sector Strategy

### 4.1 Environment sector Mission, Vision and Objectives

The **Vision** of the Environment 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 **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.....”*

This sub-sector mission is consistent with and contributes to the achievement of the ENR sector mission thus..... *“ to ensure the optimal and sustainable utilization of natural resources for economic development and poverty reduction in Rwanda by providing enabling policy framework, economic incentives, partnerships and capacities for action..”*

### 4.2 Strategic Objectives

The overall objective of the sector strategy is that all development in Rwanda is undertaken in a manner that inflicts minimal damage to the environment, and that all degraded ecosystems are restored and conserved for the sustained support to economic, social and cultural development of Rwanda.

Specific strategic objectives to be achieved are the following:

1. To ensure that the productive and regulatory functioning of ecosystems in Rwanda is restored, maintained or enhanced by rehabilitating, conserving and sustainably managing all critical ecosystems;
2. To ensure that 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. To ensure that environmental sustainability principles are effectively mainstreamed into all national development policies, programmes, plans and budgets;
4. To ensure pollution control and management
5. To ensure that Rwanda has adequate and sustained capacity for effective environmental governance and decentralized service delivery;

### **4.3 Strategic Outcomes and Outputs for the EDPRS Period**

To achieve the strategic objectives in 4.2 above, the following strategic outcomes are expected in the next 5 years. The detailed outcomes, outputs and specific activities are outlined in the log-frame in annex 1.

*Strategic Outcome 1:* Ecosystems rehabilitated, conserved and sustainably managed for effective and sustained provision of ecological, economic and socio-cultural services.

Strategic Outcome 2: National Capacity developed for cost-effective & sustainable Climate Change management:

Strategic Outcome 3: Environmental issues mainstreamed across all development sectors of the Economy in Rwanda

This outcome will be measured by the share of resources set aside for and actually spent on planning and addressing environmental issues within their sector priorities under the EDPRS and beyond.

Strategic Outcome 4: National capacity for Environmental Information Management developed

Strategic Outcome 5: Pollution control and management ensured and environmental regulations enforced for sustainable development

Strategic Outcome 6: Adequate and sustainable Institutional Capacity developed and effectively utilized for sound environmental management

### **4.4 Strategic Programmes and Activities**

In order to achieve the objectives and outcomes set-forth in 4.3 above, 6 programmes will be implemented in the next 5 years. These are briefly described in the proceeding sub-sections and expounded further in the Logical framework in Annex I. The programmes will build on and are aligned with the 4 core programmes of REMA, viz: (i) Effective legal, regulatory, policy and institutional framework for Environment Management; (ii) Sustainable management of ecosystems for income generation, (iii) Pollution management; and (iv) Climate change management. The programmes will also absorb and build on on-going projects presently aligned to REMA.

#### **4.4.1 Ecosystems Rehabilitation and Conservation**

*Rationale:* A severely degraded natural resource base, polluted environment with virtually no governance structure, was one of burdens inherited by the post-genocide Government of National Unity (GNU). While the social fabric and economic infrastructure has largely been resuscitated and even expanded, efforts to rehabilitate the damaged ecosystems have provided some interesting positive lessons but remain few, short-term, and geographically scattered with little impact. Yet degradation has also continued at unacceptable rate due to

growing human pressures. The only assessment of the environmental damage caused by the conflict was recently undertaken by UNEP and REMA but was limited in scope.

*Strategic focus:* The programme will conduct a comprehensive inventory of all ecosystems; assess their socioeconomic and ecological importance; design specific projects and implementation plans, and carry out implementation including monitoring and evaluation. The programme activities will build on recent/ on-going ecosystems rehabilitation initiatives, including DEMP (Decentralization and Environmental Management), National Youth Environment Project (NYEP), Integrated Management of Critical Ecosystems (IMCE), the Kirehe Watershed Management Project (KWAMP), and other projects implemented by MINAGRI/RADA and NGOs.

*Principal implementing partners and Implementation modalities:* The Ministries in charge of natural resources , agriculture and Livestock (MINAGRI), infrastructure (MININFRA), trade and industry (MINICOM) particularly the tourism and cooperatives departments and the district authorities will be the principal partners, alongside REMA, in the design and implementation of the ecosystem rehabilitation programme. Actual implementation of field projects and activities will be undertaken by local cooperatives, CBOs and other organized community groups mobilized and supervised by the district authorities. There is considerable scope for active involvement of civil society groups especially in resource mobilization, technical support and local capacity development. A comprehensive implementation plan, along with strategic environmental and social assessment, will be developed by REMA and implementing partners.

#### **4.4.2 Climate Change Mitigation and Adaptation**

*“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.*

*Rationale:* Although Rwanda is a low-carbon economy, it's among those most vulnerable to climate change. Recent events – prolonged droughts characterised by crop failures, erratic and destructive rains, floods, have demonstrated that climate change is real and will affect poor countries like Rwanda and poor, natural resource dependent communities with limited safety nets like the most Rwandans. Presently, climate change management initiatives in Rwanda are limited to monitoring green house gases (GHG) emissions and a few projects for mitigation and adaptation, under the Rio Multilateral Environmental Agreements (MEAs). Yet the scale and magnitude of climate change effects will be large and multi-sectoral, requiring holistic, integrated, sustainable, policy-linked interventions.

*Strategic focus:* The programme will, in the context of the EDPRS and Vision 2020, design and implement a comprehensive national climate change policy and strategy, to integrate climate change into all development policies, programmes and budgets. This long-term strategy will, *inter alia*, address the following priorities:

- Generating spatial and thematic information on Rwanda's climate change vulnerability, including implications for poverty reduction and regional integration;

- Developing a policy and institutional framework for integrated climate change management;
- Capacity development for climate change management including disaster preparedness and response, climate change mitigation and adaptation, in a sustainable way;
- Public-private partnerships for sustainable financing and management of climate change issues, including international negotiations and communication;

#### **4.4.3 Environmental Mainstreaming and Education**

*Rationale:* As demonstrated in chapter 2, environmental issues are at the core of all development processes in Rwanda. It is therefore, most appropriate that they are identified, analyzed and addressed in the sectors where they occur. Mainstreaming environment into all development processes in a clear, sector-specific manner will make development faster and more cost-effective.

*Strategic focus:* This programme will build on the existing initiatives and lessons learned, to develop capacity of the different sector actors, to identify and address environmental issues within their sectors and domains of development. The strategic aim is to ensure that ultimately, environmental issues are prioritized in the policies, plans, budgets and day-to-day activities, of the different sectors. The programme will implement interventions for mainstreaming at policy and strategy level (targeting central level actors); programmes and projects; and local development activities (decentralized entities). To ensure that the environmental mainstreaming programme is sustained, the programme will develop or consolidate existing tools and train users in strategic environmental assessment (SEA); scale-up local demonstration projects for integrated environmentally friendly development approaches; develop capacity of formal and informal education structures; and invest in economic valuation of key natural resources. Strategic partnerships between civil society, Government, private sector and communities, will be fostered.

In the context of environmental education, a key starting point will be the recently developed Education for Sustainable Development (ESD) strategy, which provides a comprehensive analysis of the underlying barriers to environmental awareness, identifies key stakeholders, and proposes participatory approaches for integrating formal and non formal environmental education, including scientific applications of environmental knowledge to livelihood improvement and economic transformation.

#### **4.4.4 Environmental Information and Knowledge Management**

*Rationale:* Lack of adequate, accurate, relevant and timely environmental information has been identified as a hindrance to effective decision making at policy, project and operational level. The fact that environmental issues cross-cut all EDPRS programmes and activities imply that environmental information is vital for planning, not only by the environment sectors but by all sectors. Timely collection, analysis and reporting on environmental information, will facilitate integration of environmental issues into sector-policies, plans and activities, thereby improving the quality, efficacy and impact of sector programmes. In the environment and natural resources (ENR) sector, environmental information will enhance environmental governance.

*Strategic focus:* During the next 5 years, the programme will develop a comprehensive environmental database, including analytical tools to facilitate decision making. It will also put in place a comprehensive framework for generation, analysis and sharing of information on environmental and related indicators, among stakeholders at national and decentralized levels.

#### **4.4.5 Pollution control and management**

*Rationale:* Pollution comes from diverse sources: domestic and industrial waste, agriculture and animal husbandry activities, mining and quarrying activities to mention but a few. Moreover the weak legislative and regulatory framework and the lack of adequate infrastructure for central sewerage treatment in urban areas have worsened the situation as far as pollution is concerned.

*Strategic focus:* This programme will focus on addressing pollution management challenges through:

- Assessment of pollution sources and levels
- Establishing and updating the management system of hazardous and toxic substances
- Effective monitoring and control of point and non point sources pollution
- Promotion of cleaner technologies and environmental best practices

#### **4.4.6 Environmental Governance Capacity Development**

*Rationale:* Although significant strides have been made in developing a solid institutional base for environmental governance, huge capacity gaps continue to manifest in environmental institutions. These make coordination of environmental planning, resource mobilization and implementation low, and undermine the ability of the Government and stakeholders to realize environment-related development objectives. Secondly, capacity development in the environment sector has been characterized by uncoordinated, disjointed interventions which have had low and unsustainable impact.

*Strategic focus:* This programme will address institutional capacity challenges for environmental management by:

- Improving the national policy, legal and regulatory framework for Environmental management
- Strengthening the institutional capacity of REMA management
- Strengthening the institutional capacity of central and decentralized entities, private sector and CSOs for environmental management
- Establishing and implementing environmental administrative, financing framework, financial management
- Strengthening and operationalizing the environmental monitoring & evaluation system
- Setting up adequate institutional capacity at the local level to undertake maintenance, conservation & sustainable management of rehabilitated ecosystems

## 5.0 Implementation Arrangements

### 5.1 Institutional Roles and Responsibilities

As indicated in annex 1 of the log-frame, the implementation of the Environment Sub Sector Strategic Plan will follow a Sector Wide Approach and will involve many stakeholders. These stakeholders have different backgrounds and understanding of the role of Environment in national development. To ensure that they work towards a common and harmonized manner, the Rwanda Environment Management Authority will cooperate with all involved stakeholders for effective environmental management. There will be strong coordination in planning, implementation, monitoring and evaluation of all Environment Sub Sector activities. This will lead to priority for every stakeholder to plan and implement Environment activities. Regular monitoring will be critical to the successful implementation of this Strategic Plan.

Its plan has been developed under a new paradigm that 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 implementation of this plan is a shared responsibility and will be apportioned as follows:

#### 5.1.1 Public Institutions and Agencies

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

**2. MINELA:** as the ministry responsible for environment, MINELA 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. MINELA 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.

**3. Other ministries and agencies:** these have been categorized into 3: the productive sectors; social services and protection; and regulatory agencies.

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,..) 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-related disasters, losses and inconveniences. 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 within the formal and non formal education system at all levels; and ensure that all education infrastructure development plans undergo strategic environmental assessment (SEA). The national disaster management coordination secretariat will adopt early warning system, that incorporates 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 through the CDF and through direct transfers, local authorities have considerable resources to finance their DDPs and Performance Contracts (*Imihigo*). The district authorities will prioritize – in planning and budgets, environmental issues, as most districts are dependent on environmental resources but also vulnerable to environmental calamities. They will integrate SEA principles into their DDPs and *Imihigo*, 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 the 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 challenges prioritize 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.

### 5.1.2 Donors and Development Partners

**Lead development partners:** The Co-Chairs of the Environment Theme Group of the One UN Programme (UNDP and UNEP) and SIDA (the Swedish International Development Cooperation Agency) were identified and expressed commitment to actively participate in the Environment Thematic Working Group (ETWG) that has overseen the strategic planning process. SIDA is co-chairing the ETWG while UNDP is co-chairing the ENR sector working group (SWG) at sector level. These two agencies will be responsible for mobilizing the support and participation of other multilateral and bilateral development partners to provide the needed sub-sector funding into the Environment Basket fund. 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. Other UN Agencies

involved in the One UN Programme and implementing environmental and natural resources management related activities are also supporting the overall process.

**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 a limited cooperation between regional organizations and Government agencies to the effect that the interventions of some regional bodies were hardly known and not reflected in national plans and activities. Collaboration has generally been limited to participation in workshops and meetings. Yet trans-boundary programmes like NELSAP, International Gorilla Conservation Programme (IGCP) have responsibility to work with national programmes.

### 5.1.3 Other Non state actors

**1. 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), have widened opportunities for civil society in Rwanda to take a lead in environmental management. The 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.

**2. The Private Sector Federation (PSF):** 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 the ecosystems. Businesses are at the centre of resource extraction and their activities generate waste which they must participate in cleaning up. The entrepreneurs' ability and self-drive to identify business opportunities in and innovative solutions to many challenges, will have to be leveraged to address Rwanda's emerging environmental challenges, which are inherently global. The 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 the EDPRS implementation.

**3. Media:** the media has played a crucial role in raising public awareness about 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.

## 5.2 Action Planning, Monitoring and Evaluation

### 5.2.1 Formulation of Action Plans as a basis for budget execution

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. Action plans are also important because budget releases are made on a quarterly basis and, for some budget lines, accountabilities are provided on a monthly basis.

### 5.2.2 Monitoring and evaluation

REMA, through PEI and AEIN programmes, has started initiatives to develop a comprehensive monitoring and evaluation system for the environment in Rwanda.

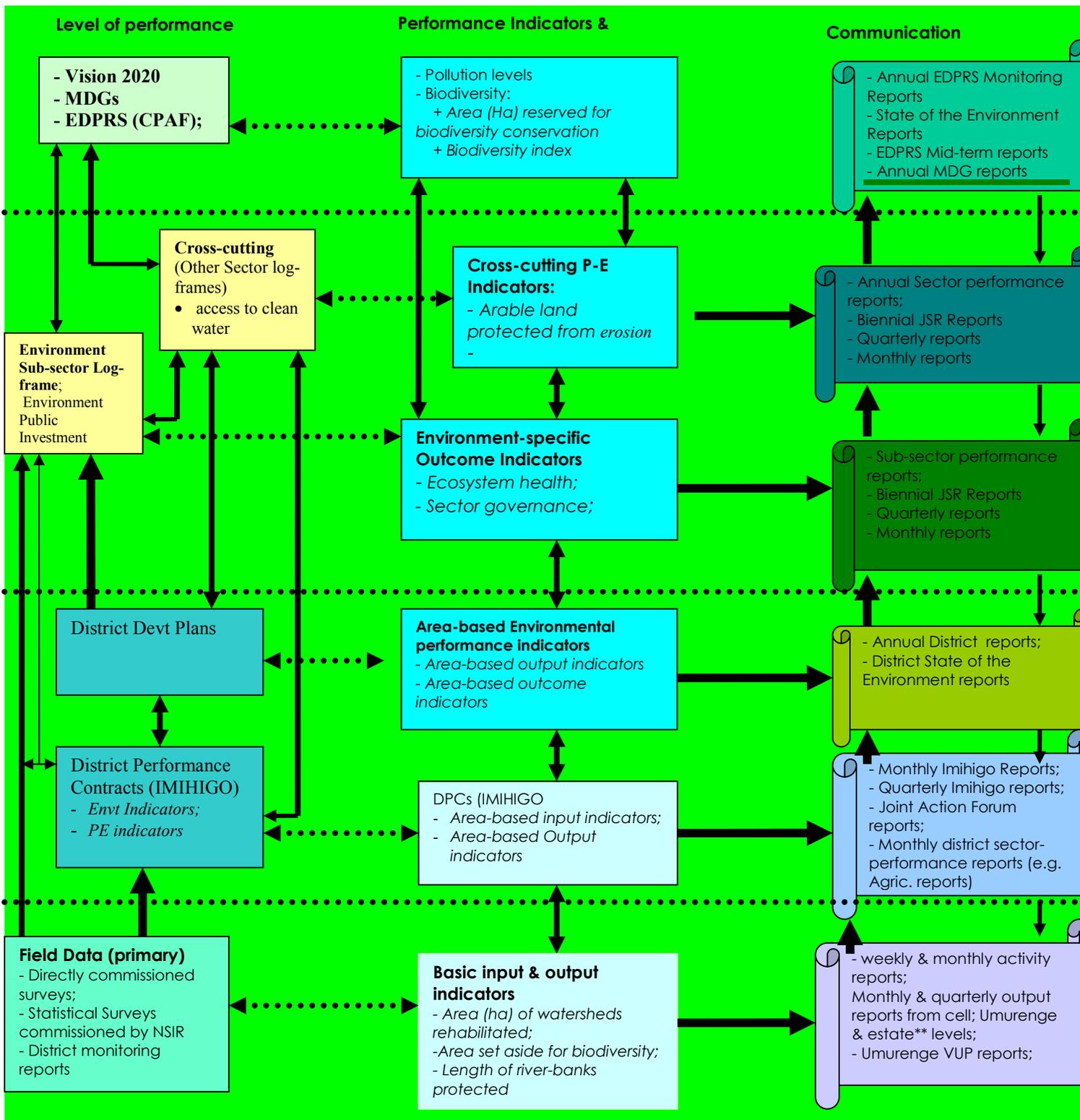
In the context of the EDPRS, the M&E reporting for the environment sub-sector will be characterized by:

**i) Indicator-based** i.e. all reports will provide information that enable tracking, assessing, analyzing of or making inference about progress between reporting periods, towards set targets on selected indicators;

**ii) Accountability-orientation:** in the past, reporting has tended to be down-up, 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 obligation to account for inputs towards improving the state of indicators being monitored.

**iii) 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-environment (P-E) related, they will be tracked in various sectors. The M&E system proposed in figure 2 will enable cross-sectoral information sharing.

**Figure 2: Environment Monitoring and Evaluation Framework: Conceptual framework**



\*\* Estate could imply forest unit; river sub-basin or cluster of resource users or project beneficiaries.

### **5.3 Resources and Results Coordination strategy: Sector-wide Approaches**

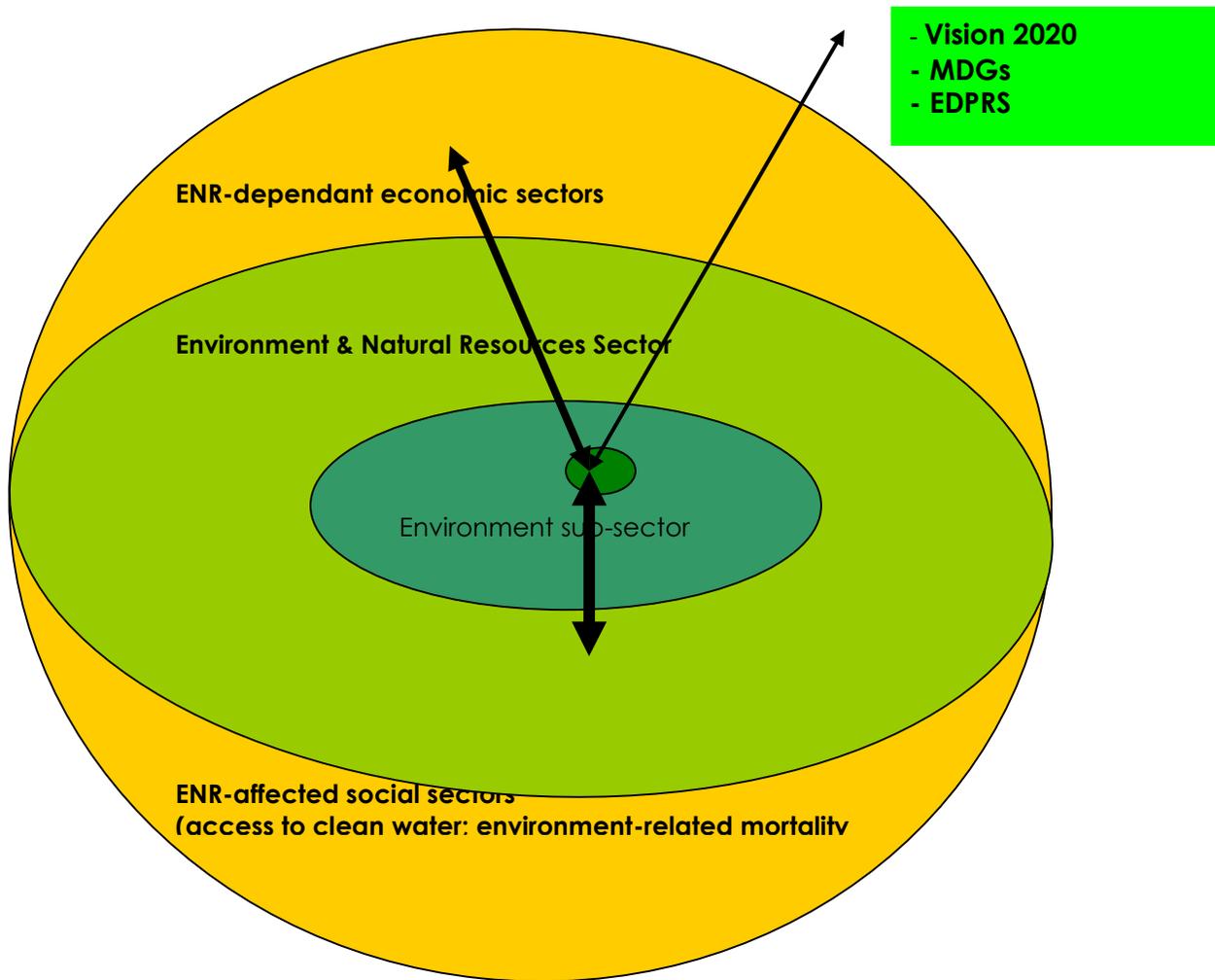
It is envisaged that this plan will be financed by resources from diverse sources, and implemented by different institutions and actors. Owing from recent experiences of many small short-term projects and inadequate direct funding from Government budget, innovative strategies are needed to mobilizing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

A SWAp (sector-wide Approaches) development process is being developed with strategic leadership of MINELA and UNDP. It is expected that by the end of the first year of this plan, it will be operational. 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. By its embeddedness and cross-cutting nature, environment is one of the most difficult sectors to define. Even with clear sectoral and cross-sectoral targets (as indicated in figure 2), there are grey areas on who should or must be involved in the sector. 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.

The sectoral and cross-sectoral boundaries of the environment sub-sector and its spheres of influence can be visualized in a simple conceptual model in figure 3.

**Figure 3: Visual Position of the Environmental sub-sector within the EDPRS**



Appreciating the positioning of the environment and understanding its sphere of influence in the implementation of the EDPRS, will be the first crucial step to effective coordination. It will also be important for the different actors (Government agencies, civil society organizations, private enterprises and local communities). In this regard, the Environment Thematic Working Group (ETWG) has already started identifying and mobilizing stakeholders.

As clearly stated in the ENR SSP, the ENR sector is diverse (covers mining, forestry, water resources, lands and environment) and linked in complex ways to other economic and social sectors (health, agriculture, energy, tourism, housing, macroeconomic management, gender and social development, etc).

Innovative ways of coordinating the sector will have to be employed – and the ENR WG and ETWG will design an appropriate framework that will help build synergies and deliver expected results.

## 5.4 Results Management

### 1. The Log-frame

The logical framework in Annex 1 provides the framework for monitoring the programmes implementation and for tracking the results. Detailed annual, quarterly and monthly action plans will be designed by the implementing parties based on the broad timelines provided. Elaborated in accordance with the international results management framework standards, this log-frame starts with the key results that the sub sector expects to achieve. It provides a range of activities, key performance indicators with means of verifications, baseline and targets.

As the Environment sub Sector Strategic Plan will be implemented using the Sector Wide Approach, there will be obviously different stakeholders' involvement. The roles are shown and the implementing responsible indicated for easy and accountability monitoring.

### 2. Information management

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

**3. Participatory accountability and Reporting from Sector-wide perspective:** Presently, it would seem that joint sector reviews (JSRs) as important mechanisms for coordinating stakeholder activities, are expected to be participatory and reflective of mutual accountability. However, it would seem that 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 are necessary 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. Detailed Terms of Reference (ToRs) will be developed by the ETWG to ensure active participation of all stakeholders.

**4. 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.

## **6.0 Budget, Financing and Financial Management**

### **6.1 Cost structure and costing of Planned Activities**

The programme cost over the next 5 years will be an estimated **USD 67,991,479 (about RwF 38,755,142,984)<sup>3</sup>**. **Allocations by programme outcome and by year are summarized in table 1.**

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<sup>3</sup> Conversion based on an average exchange rate of 1 USD = 570 as per BNR rates as of February 18<sup>th</sup>, 2010.

**Table 2 : Summary of the budget estimates**

No	Programme outcome	Total estimates in RWF	Allocation per year				
			2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
1	Outcome 1: Ecosystems rehabilitated, conserved and sustainably managed for effective and sustained provision of ecological, economic and socio-cultural services	17,880,416,000	3,042,645,000	5,688,140,600	4,205,165,400	2,842,645,000	2,101,820,000
2	Outcome 2: National Capacity developed for cost-effective & sustainable Climate Change management	5,496,367,500	107,388,000	3,374,314,500	1,304,160,000	671,745,000	38,760,000
3	Outcome 3: Environmental issues mainstreamed across all development sectors of the Economy in Rwanda	3,027,462,339	373,125,000	976,470,000	512,745,250	518,453,763	646,668,326
4	Outcome 4: National capacity for Environmental Information Management developed	2,832,190,000	405,000,000	1,168,562,500	770,402,500	235,862,500	252,362,500
5	Outcome 5: Pollution management ensured and environmental regulations enforced for sustainable development	1,458,003,000	97,185,000	469,794,000	327,180,000	251,769,000	312,075,000
6	Outcome 6: Adequate and Sustainable Institutional Capacity developed and effectively utilised for sound environmental management	8,060,704,145	1,607,817,972	1,784,758,972	1,529,390,829	1,653,927,686	1,484,808,686
	<b>Total Programme Implementation Estimates in RWF</b>	<b>38,755,142,984</b>	<b>5,633,160,972</b>	<b>13,462,040,572</b>	<b>8,649,043,979</b>	<b>6,174,402,949</b>	<b>4,836,494,512</b>

## 6.2 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 MINELA 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 (MINELA/REMA, the financing development partners) and MINECOFIN;

**3. External sources mobilized into basket fund:** It is anticipated that with the SWAp operational before the end of the first year (2010), sufficient funding will be mobilized through the ENR SWAp basket. This anticipation should also serve as a strong incentive for the ETWG to ensure that the ENR SWAp is fast-tracked and becomes operational as planned.

**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 be raised by MINAGRI, the forestry, mining and land sub-sectors, as well as district authorities.

Beyond the current programme, it is expected that a national environment fund (FONERWA), whose establishment is provided for by law, is expected to assist generate sustainable funding. However, only seed funds for its operationalisation have been included in the strategy budget.

The table below shows that there is a funding gap of approximately Frw 17 billion between funding estimates for programmes and budget commitments to the sub-sector (both from the budget and projects)

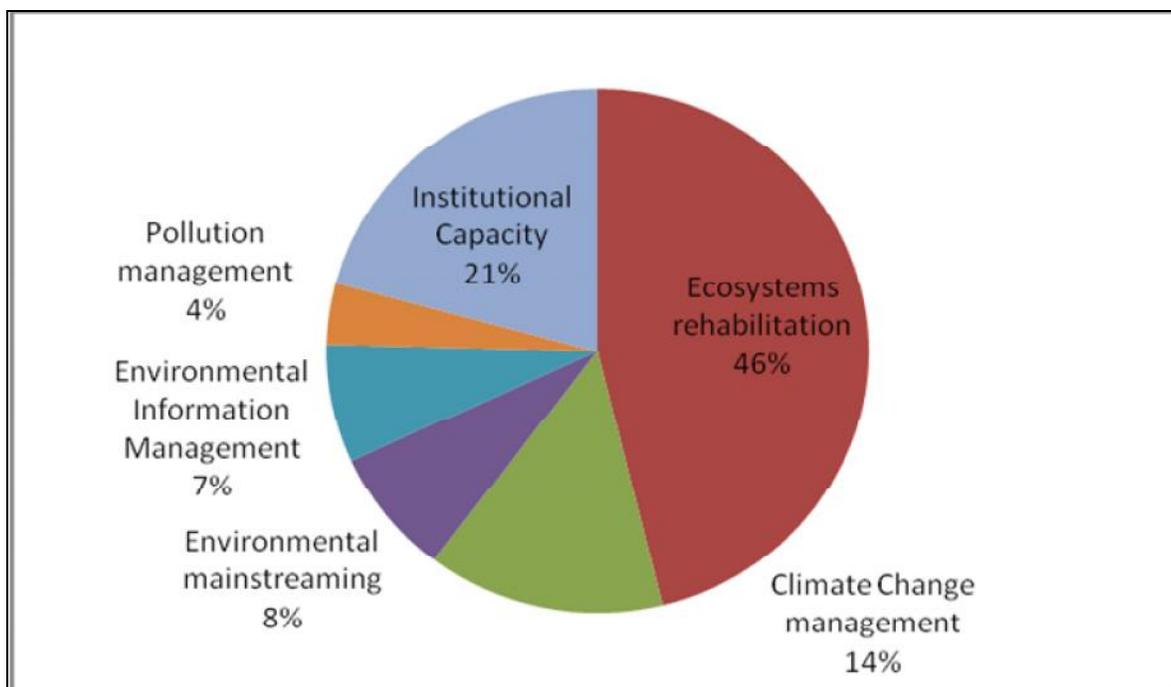
**Table 3: Funding Gaps**

<b>No</b>	<b>Programme outcome</b>	<b>Total 5 Yrs estimates in RWF</b>	<b>Total funds availability</b>	<b>Gap</b>
1	Ecosystems rehabilitation	17 880 416 000	8 790 296 297	<b>9 090 119 703</b>
2	Climate Change management	5 496 367 500	5 196 427 750	<b>299 939 750</b>
3	Environmental mainstreaming	3 027 462 339	376 114 000	<b>2 651 348 339</b>
4	Environmental Information Management	2 832 190 000	713 284 800	<b>2 118 905 200</b>
5	Pollution management	1 458 003 000	622 084 900	<b>835 918 100</b>
6	Institutional Capacity	8 060 704 145	6 238 430 948	<b>1 822 273 197</b>
	<b>TOTAL</b>	<b>38 755 142 984</b>	<b>21 936 638 695</b>	<b>16 818 504 289</b>
	<b>Gap %</b>			<b>43%</b>

### 6.3 Resources Allocation and Financial Management Arrangements

Resource Allocation to the programme components, as indicated in table 1 and graph (figure 4) indicate that the bulk (about 46% of the sub-sector funds will be spent on rehabilitating degraded ecosystems. This is in line with the national priorities and the fact that ecosystems degradation has been identified as one of the major barriers to realizing the vision 2020.

**Figure 4: Environment sub-sector Budget allocation by Programme outcome 2010 -2015**



#### **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 (MINELA), provide technical support and guidance to the ETWG 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. The first detailed PER for the environment sub-sector is on-going by the time of preparing this strategy. It will, hopefully, provide sufficient baselines for setting realistic targets both for financial mobilization and results.

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## Annexes

Annex 1: Results Management framework for the Environment Sub Sector Strategic Plan (2010/2015)

Annex 2: Budget estimates for the Strategic Environment Sub Sector Strategic Plan (2010/2015)

Annex 3: Key Stakeholders Matrix