



Mainstreaming Resource Efficient and Cleaner Production in Policies and Strategies of Rwanda



MAINSTREAMING RESOURCE EFFICIENT AND CLEANER PRODUCTION IN POLICIES AND STRATEGIES OF RWANDA

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EXECUTIVE SUMMARY

Rwanda has become known as the symbol of the African turnaround due to its fast and successful reconstruction and development following the tragic events of 1994. The country has recorded consistent economic growth with GDP currently growing at 6.2%/yr maintaining a 5-year average of 8.5 from 2005 to 2010 despite the relatively high inflation of 12%. The country started reconstruction from a low base and the majority of Rwandans are still poor with about three quarters of the population living under US\$ 2 per capita a day. The Human Development Indices (HDI) for Rwanda are still low despite the rapid improvement. However, the GNI per capita increased steadily to US\$520 in 2009 corresponding with steady economic growth.

In its Vision 2020, Rwanda aspires to be a private sectors-lead middle income country requiring an annual per capita income of US\$ 900 driven by 1.4 million jobs outside agriculture projected for the estimated 13 million population level in 2020. However, noting that over 80% of Rwandans are engaged in agricultural production, the Government of Rwanda (GoR) recognizes that growth of Small and Medium-sized Enterprises (SMEs) will play a critical role in creating jobs in alternative sectors. The SME sector, including formal and informal businesses, comprises 98% of the businesses in Rwanda and 41% of all private sector employment, though the formalized sector has much growth potential.

The Rwanda State of Environment and Outlook (REMA 2009) identified maintenance of biodiversity, water supply, food production and energy resources as the four major ecosystem services for Rwanda and noted that all four services are stressed. On the economic side, the 2006 economic analysis of natural resource management in Rwanda revealed that the economic loss due to soil erosion was equivalent to 1.9 per cent of Rwanda GDP while a 25% drop in agricultural erosion was caused due to soil erosion. While recognizing the low level of industrial development in the country, the report indicated that the unplanned location of industries combined with low level of technologies used and the absence of proper waste management systems is affecting the surrounding environment. The impact of existing industries is stronger on the surrounding wetland systems within which most of the old industries are located. Mining and quarrying, which contributes about 0.6 per cent of the total GDP, is also identified as a source of growing concern due to its environmental impact.

In terms of policy options for action, the outlook underlined the importance of integrating environment into policies, plans and programmes as provided in the Environmental Management Policy. It also recognizes that documenting and publicizing the mutual benefits of cleaner production programmes to industry, the economy and the environment would help in facilitating industrialization that is pro-poor, pro-jobs and pro-environment. In this context, it recommended that the cleaner production programme should be expanded in order to ensure that expanded industrial production brings benefit to industry, the economy and the environment. It also recommended to further strengthening the monitoring and enforcement of the laws and regulations governing industrial and mining operations.

The Pilot Project on Cleaner Production that was implemented by Rwanda Environment Management Authority (REMA) in partnership with UNEP in 2005 demonstrated that there is a significant potential for efficiency improvement within existing industries. This together with the institutional awareness and appreciation developed provided the basis for the Rwanda Resource Efficient and Cleaner Production Programme (RRECPP) that is currently being implemented as part of the 'One Programme' of the United Nations in Rwanda. Within this joint programme, UNEP and UNIDO are taking the lead on implementing the policy component which focuses on developing a strategy

for mainstreaming RECP in the country's national policy and strategy frameworks and encouraging the establishment of the institutional framework for RECP advocacy and promotion.

Mainstreaming, in the context of this report, is an institutional process that facilitates a systematic integration of sustainability principles in existing policy frameworks and institutional practices. Mainstreaming is not about creating another layer of policy or institutional process. It is more about transforming existing policy and institutional processes and practices in such a way that it fosters and promotes sustainability at all levels. Mainstreaming an issue into national development planning thus refers to incorporating that issue into all elements of a country's plans, policies, programmes, strategies and budgets and their implementation. As a basis for this process, a detailed review of the existing policy and strategy frameworks was conducted and the possible elements of the strategy for mainstreaming Resource Efficient and Cleaner Production (RECP) in the country's national policy and strategy processes are proposed.

With regards to the policy review, the Economic Development and Poverty Reduction Strategy (EDPRS), as the MDG-based implementation framework of the national development programme articulated in Rwanda's Vision 2020, carries the most important relevance with respect to mainstreaming RECP into sectoral policy, plans, programmes and strategies. Vision 2020 and the EDPRS 2008-2012 have been reviewed together with the key production sectors of Agriculture, Environment and Natural Resources, Water and Sanitation Services, Energy, Industry and SME Development. The review has revealed existing opportunities and limitations associated with the respective sectoral policies, legislation and strategies in the context of mainstreaming RECP in Rwanda. Table 1 shows the potential strategic entry points within existing policy and strategy frameworks and the limitations that need to be addressed in terms of mainstreaming RECP in Rwanda.

Table 1. Summary of opportunities and limitations from existing Strategies

Potential strategic entry points	Major limitations to RECP promotion
EDPRS 2008-2012	
<p>Science & Technology: Establishment of technology diffusion funds and establishment of science and technology centres</p> <p>Private sector: Establishment of regional industrial parks and free-trade zones</p> <p>Education: Development of Technical and Vocational Education and Training (TVET) Policy</p>	<p>Environmental sustainability could have been better incorporated within the proposed sectoral actions under the policy matrix</p> <p>It is up to sectors to interpret and develop EDPRS cross-cutting issues into effective outcomes. Outcomes may be ineffective due to inadequate appreciation of the issue in terms of perceived prioritization, level of technical knowledge and skills and other factors</p>
Agricultural Transformation Strategy 2009-2012	
<p>Strengthen environment for agro-business, especially with reference to meeting international standards for export products</p> <p>Implementing pilots for pressurized irrigation on hillsides and 'fertigation' systems</p>	<p>The potential for environmentally friendly farming such as organic farming for green products that leave a low carbon footprint is missing as the focus is only on efficacy of chemical fertilizer, pesticide and other inputs</p>

Table 1 (continued)

Table 1. Summary of opportunities and limitations from existing Strategies

Potential strategic entry points	Major limitations to RECP promotion
Environment & Natural Resources Strategy 2009-2013	
<p>Integrate environmental dimension in economic planning by taking the impact and the cost of environment in socio-economic planning into consideration</p> <p>Integrate environmental aspects in commercial and industrial activities and promote environmentally friendly tourism</p> <p>Promote environmental education, information and sensitization actions including incorporation of environment in primary, secondary and tertiary education</p>	<p>No explicit reference to the promotion of cleaner production or efficient resource utilization in the strategic actions for Industry</p> <p>Key performance indicators for the ENR-SWG are not synchronized with the monitoring and evaluation system in EDPRS</p>
Water & Sanitation Strategy 2009-2015	
<p>Favourable water resources management principles based on precaution, prevention, 'user-payer and polluter-payer' and charges as per 'contributory capacity of users' principle</p> <p>Incentive through reduction of royalties to all persons/entities who use less volume of water or reduce pollution</p>	<p>No specific provision on development and implementation of demand-side management programmes</p> <p>No dedicated water and sanitation services authority resulting in delegation of the policy implementation to various agencies</p>
Energy Strategy 2008-2012	
<p>Expansion of the energy-mix through the development of new and renewable energy sources</p> <p>Promotion of efficient energy use and management practices including efficient use of alternative energies in industries and services</p> <p>Use of the Clean Development Mechanism to facilitate the development of environmentally sound energy and reduction of emission</p>	<p>Mainly focused on increased generation, access and use of energy with limited emphasis on demand-side interventions</p>
Industry Strategy 2009-2012	
<p>Evaluate infrastructure needs of new industries and how they can be combined with existing policy on infrastructure</p> <p>Determine the effect of national and international standards provision on Rwandan firms particularly on exporters including cost of certifications</p> <p>Revise the existing SME policy/strategy for a large expansion of SMEs and establish industrial parks beginning with five pilot parks</p>	<p>The proposed one-stop shop service to industries does not explicitly include environmental aspects</p>

Table 1 (continued)

Table 1. Summary of opportunities and limitations from existing Strategies

Potential strategic entry points	Major limitations to RECP promotion
SME Development Policy 2010	
Establish 12 Centres of Excellence offering full-scale Business Development Services (BDS) and SME Business incubators	No reference to the importance of promoting environmentally friendly or resource efficient production for sustainable business
Promote creativity and innovation in the SME sector through schemes that recognize innovation and technology development	
Introduce appropriate technology demonstration centres within industrial parks for practical training and acquisition of technologies	

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Mainstreaming RECP in Rwanda can be initiated by utilizing the opportunities presented by the existing policy, legislative and strategic frameworks while at the same time taking steps to remove the identified limitations. Further articulation should be derived from the results on the recent Sector Self Evaluations that will inform the next generation EDPRS 2013-17. The following are identified as the key elements of the strategic measures that could be taken under four categories of programmatic mainstreaming based on the policy review:

Institutional and policy integration:

Facilitate the implementation of the Economic Development and Poverty Reduction Strategy (EDPRS) on a resource efficient basis by mainstreaming RECP in the development of the relevant Sectoral Strategic Plans that are executed through Sector-Wide Approaches (SWAPs) facilitated by the Sectoral Working Groups (SWGs).

Promote awareness among enterprises that putting a RECP programme in place enables them to comply with standing environmental regulations for rehabilitation or expansion requirements and to pass audit test for their respective environmental management plans.

Ensure that adequate and explicit consideration is given to resource efficient and cleaner production methods and technologies in Environmental Impact Assessments of new projects in the planning and development of new industrial parks.

Make the transition from the current ad-hoc way to a more institutionalized way of promoting RECP in Rwanda by:

Establishing a National Steering Committee that is chaired by MINICOM and vice-chaired by MINERENA and that has representatives of REMA, RDB and other relevant organizations and private sector representatives to provide guidance.

Formalize the institutionalization of the Rwanda Resource Efficient and Cleaner Production Centre (RRECPC) under the MINICOM Industrial Development Programme. The RRECPC may deploy a representative in the One-Stop-Centre with RDB to sensitize new businesses with RECP as a means of complying with environmental management requirements and for reducing production costs. The Industrial Development Programme is currently implementing the projects for the "Gikondo relocation" to a new industrial zone and establishing Regional Industrial Parks, aspects that were identified as potential entry points for mainstreaming RECP.

Based on this report, prepare a cabinet paper on 'Promoting Resource Efficient and Cleaner Production in Rwanda' as a paper that would be submitted to the cabinet by MINICOM.

Economic and Fiscal Incentives

Introduce economic instruments including environmental charges, fees for non-compliance and liability payments targeting the major environmental problems related to air pollution, water quality and land management and provide incentives to those which are reducing their pollution and environmental pressure through efficient utilization of resources. These instruments could be managed through the soon legislated National Environmental Fund (FONERWA - French abbreviation).

Apply appropriate tax measures on pollution-inducing goods and services (such as taxes/charges on batteries and accumulators, electronic waste and other environmentally harmful products) and provide tax-exemptions and/or rebates on technological goods (such as renewable and clean technologies) that facilitate the transition towards a more resource efficient society.

Get rid of subsidies that encourage inefficient resource utilization (including across-the board subsidies on basic resources use such as water and energy) and extend the energy subsidy beyond access facilitation so that it could cover efficient energy utilization mechanisms.

Provide special considerations for green economy sectors, including renewable resource-based production such as organic farming and provision of environmental management services, with a purpose of creating green jobs and contributing to the low carbon and resource efficient economy.

In the long-term, consider gradual shifting of taxes from labour to energy and resources consumption thereby encouraging job creation while at the same time promoting more efficient resource use. This would require undertaking a comprehensive and systematic assessment of economic and environmental fiscal reform (EFR) as part of the transition towards Green Economy¹.

1. It is a good moment for Rwanda to consider this measure as an EFR has been completed by REMA and the country is in the process of developing a National Strategy on Climate change and Low Carbon Development for Rwanda.

Capacity Building and Support to SMEs

Develop a national technical support programme on RECP that will provide technical back-up support to SMEs in the development and implementation of Resource Efficiency Improvement Programme and fulfil the proposed requirement for renewing their environmental permit for operation.

Enhance the capacities of technical service institutions and programmes, including an institutionally regularized national RECP centre, energy and water and sanitation service companies, the Private Sector Federation, the planned Business Development Centres (DBC)s and Demonstration Centres and other industry support centres, in providing technical information and support to SMEs on the application of clean technologies and the development and implementation of resource efficient industrial improvement programmes.

Include the provision of financial support to projects that are aimed at improving the resource efficiency of an SME as one of the project portfolios to benefit from the support that is to be provided through the soon to be legislated National Environmental Fund (FONERWA - French abbreviation) which could be augmented through environmental tax and charges to be collected from polluting industries.

Provide policy and institutional support for the formal development and operation of waste recycling groups with a particular focus on enhancing their economic and social contributions through waste-to-resource conversion and job-creation.

Train the REMA interns that are deployed in sectoral ministries the support from the 'Poverty and Environment Initiative so that they could facilitate the mainstreaming of Resource Efficiency in the respective sectoral programmes.

Train designated staff in MINECOFIN, MINICOM and MINALOC as respective key oversight, support and decentralization line ministries, in RECP principles, strategies and practices.

Facilitate Rwandan enterprises in accessing the African eco-labelling mechanism.

Information and Public Education

Support the creation of national information systems on RECP that would improve the availability of data and information on RECP related issues, including information on clean technology options and financing opportunities, and link such a system with the country's investment licensing process so that new investment decisions could benefit from making environmentally sound decisions in their technology selections.

Introduce an environmental reporting requirement and funding mechanisms for industries and businesses covering basic data on the volume of resources consumed and waste generated and discharged including air emissions.

Ensure that the public sector (e.g. government agencies) is leading by example in promoting Resource Efficient and Cleaner Production by adopting and implementing the principles of sustainable public procurement in its public sector procurement procedures.

Require utility companies covering key resources such as energy and water to develop and implement demand-side management programmes that are aimed at promoting efficient resource utilization and reduction of waste by the general public, resulting in companies meeting higher demand without having to producing more. Such programmes could consist of the organization of

public campaign weeks on energy and water use, efficiency awards to industries and community groups and media campaigns.

Promote the integration of subjects related to Resource Efficient and Cleaner Production in the curriculum of universities² and the relevant Technical and Vocational Education and Training programmes and support continuous RECP education programmes targeting key economic sectors and community groups. Promote informal public education programmes for promoting RECP through appropriate media.

2. Initially this could particularly focus on engineering and business faculties in view of the significance it would have in industries' planning and decision making process.

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ACRONYMS

AEO	African Environmental Outlook
CDM	Clean Development Mechanism
CP	Cleaner Production
EAC	East African Community
EDPRS	Economic Development and Poverty Reduction Strategy
EIA	Environmental Impact Assessment
ENR	Environment and Natural Resources
EWUSA	Electricity Water and Sanitation company
FONERWA	Environment Fund of Rwanda (French acronym)
GDP	Gross Domestic Product
GEO	Global Environmental Outlook
GoR	Government of Rwanda
HDI	Human Development Index
ICT	Information and Communications Technology
LVEMP	Lake Victoria Environmental Management Project
M&E	Monitoring and evaluation
MDG	Millennium Development Goal
MINAGRI	Ministry of Agriculture and Animal Resources
MINECOFIN	Ministry of Finance and Economic Planning
MINERENA	Ministry of Environment and Lands
MINICOM	Ministry of Trade and Industry
MINIJUST	Ministry of Justice
MININFRA	Ministry of Infrastructure
MTEF	Medium Term Expenditure Framework
NAFA	National Forestry Authority
NCPC	National Cleaner Production Centres
NGO	non-government organisation
OGMR	Rwanda Geology and Mining Agency (French translation)
PEI	Poverty -Environment Initiative
PPP	Policy Plan or Programme
PRSP	Poverty Reduction Strategy Paper
PSF	Private Sector Federation
PSTA	Strategic Plan for the Transformation of Agriculture in Rwanda - Phase II
RDB	Rwanda Development Board
RECP	Resource Efficiency and Cleaner Production
RRECPC	Rwanda Resource Efficient and Cleaner Production Centre
REMA	Rwanda Environment Management Authority
RENGOF	Rwanda NGOs Forum (French translation)

RRECPP	Rwanda Resource Efficient and Cleaner Production Programme
SEA	Strategic Environmental Assessment
SMEs	Small and Medium Enterprises
SOE	State of the Environment Report
SSP	Sector Strategic Plan
SWAp	Sector Wide Approach
SWG	Sector Working Group
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-HABITAT	United Nations Human Settlements Programme
UNIDO	United Nations Industrial Development Organization
Vision 2020	Rwanda Vision 2020 (long-term development programme)
VUP Vision 2020	Umurenge Programme (EDPRS Flagship Programme)

1. INTRODUCTION

1.1 Socio-economic profile of Rwanda

Rwanda has become known as the symbol of the so-called “African turnaround” since its fast and successful reconstruction and development following the tragic events of 1994. Rwanda has recorded consistent economic growth with the GDP currently growing at 6.2%/yr maintaining a 5-year average of 8.5 from 2005 to 2010 despite the relatively high inflation of 12% (Table 1).

The country started reconstruction from a low base and the majority of Rwandans are still poor with about three quarters of the population living under US\$ 2 per capita a day. The Human Development Indices (HDI) for Rwanda are still low despite the rapid improvement. However, the GNI per capita increased steadily to US\$520 in 2009 corresponding with the steady economic growth.

There are many challenges still constraining the economy and livelihoods of Rwanda. Productive sectors are led by services that contributed 48% to the GDP in 2009 followed by agriculture with 39% and industry by 13%. Remittances from the Rwandan Diaspora also significantly supports the economy having risen from US\$ 8.6million 2005 to US\$ 88million in 2009. Economic challenges are tackled through the MDG-based 5-year Economic Development and Poverty Reduction Strategy as laid out in Rwanda’s Vision 2020.

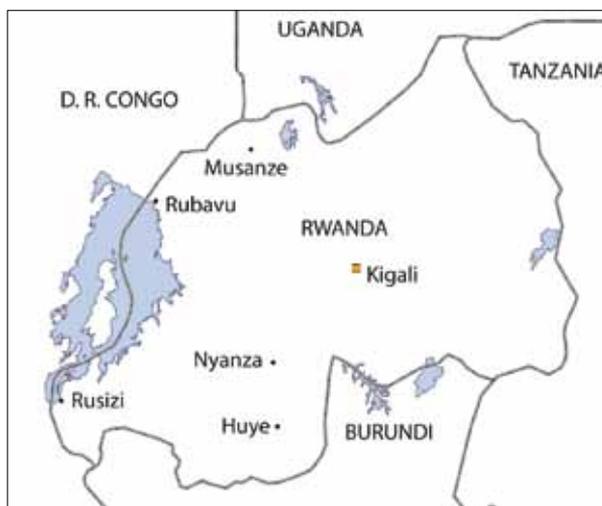


Table 2 Key Socio-Economic Indicators for Rwanda

Key Socio-economic Indicator	Value Rating
Surface area (x1000 square km, 2009)	26.34
Population (in millions, 2009)	10.12
Population growth (annual, in %, 2009)	2.81
Population density (people per sq. km of land area)	394
Life expectancy at birth (in years, 2009)	50
GDP (current US\$, in billions, 2009)	5.06
GNI per capita MINECOFIN (current US\$, 2009)	520
GDP growth (annual, in %, 2009)	6.20
Inflation (GDP deflator, annual, in %, 2009)	12.12

Key Socio-economic Indicator	Value Rating
Agriculture value added (% of GDP, 2009)	38.74
Industry value added (% of GDP, 2009)	13.47
Services value added (% of GDP, 2009)	47.79
Exports (% of GDP, 2009)	9.01
Imports (% of GDP, 2009)	27.05
Remittances from Rwanda's living abroad (2009)	88.13
ODA, official aid (current US\$ in millions (2008)	931

Source: World Bank; MINECOFIN

Current exchange rates as of 09/02/2011 (source:oanda.com)

1 EUR = 806 FRW; 1 US\$ = 592 FRW.

The macroeconomic stability reflected by the statistics in Table 1 confirms effectiveness of the policies that have been put in place and being implemented. Rwanda is now widely considered peaceful, safe and secure with stable and optimally functioning institutions. The country is believed to be on track towards achieving MDGs.

1.2 Rwanda State of the Environment

In carrying out its mandate, the Rwanda Environment Management Authority (REMA) takes due reference to the fact that 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 Vision 2020 (July 2000). This realization has been translated into a resolve of the Government of Rwanda (GoR) to effectively control pollution, conserve biodiversity, and restore productive ecosystems.

Against this background, Organic Law N° 04/2005 of 08/04/2005 determining the modalities of protection, conservation and promotion of environment in Rwanda obligates REMA to prepare and publish a report on the state of natural resources in Rwanda biennially. The first comprehensive State of Environment Report was published in 2009 in fulfilment of this obligation. The State of Environment (SOE) report provides a baseline for environmental data and indicators for Rwanda, which can feed into other regional and global environmental reports such as the African Environmental Outlook (AEO) and the Global Environmental Outlook (GEO).

The Rwanda SOE covers environmental performance at national level including appropriate alignment with the Rwanda Vision 2020 and its implementation framework, the Economic Development and Poverty Reduction Strategy (EDPRS), in which environment is a pillar as well as a cross-cutting issue. Progress in tree planting and erosion control efforts are reported as well as those in the conservation of biological diversity. The SOE also reports on Rwanda's environmental performance at regional and global levels noting above average performance within its income group in the indicators for sanitation, drinking water and effective conservation. The report recognizes the commendable success of the post-genocide political dispensation given the challenges faced.

The SOE made assessments under the themes: Environment and Economic Development; Land Use and Agriculture; Forest and Protected Areas; Climate Change and Natural Disasters; Water

Resources and Wetlands; Biodiversity and Genetic Resources; Population, Health and Human Settlement; Energy Resources; Industry and Mining; Environmental Policies, Legislation and Institutional Arrangements and Environmental Trends and Scenarios.

1.2.1 Key highlights of Environmental Scenarios

The SOE formulated four scenarios in which different policy approaches are projected into possible socio-economic development outcomes in the future considering demography, social change, technology, economy, culture and tradition, environment and governance as drivers that determine levels of production and consumption of environmental resources. The four are comprised of the Market Forces Scenario, the Policy Reform Scenario, the Fortress Scenario and the Great Transition Scenario.

The Market Forces Scenario

The Market Forces Scenario is based on the premise that the exploitation of goods and services are dictated by profit objectives and market forces even at the expense of the environment that lead to the following RECP-relevant impacts by 2025:

Water:

- Rapid urbanization leading to rapid aquifer depletion.
- Endangered freshwater ecosystems and fish stocks.
- Huge expenses associated with water infrastructure (new and rehabilitated).
- Conflicts over water rights .

Chemicals:

- Rapidly increasing production leads to increased chemical load in environment.
- Too many new chemical compounds introduced too quickly for adequate testing for impacts.
- New pharmaceuticals proliferate appearing in water supply and waste products.

Urban sprawl:

- Increased non-point pollution.
- Increased air pollution from mobile sources.

Biotechnology and nanotechnology:

- Little effort to develop potential of biotechnology or nanotechnology for environmental remediation, clean energy and manufacturing.
- Nanotechnology emerges faster than the societal conversation on how to use it safely and poses unusual risks.

Climate change:

- Rapid growth in energy and endless debate over the reality and seriousness of climate change leads to a rapid rise in CO₂ concentrations.
- Increase in insect- and animal-borne diseases, both endemic and imported.

The Policy Reform Scenario

The Policy Reform Scenario is based on the premise that the environmental dimension is an integral part of the search for sustainable development applying legal instruments to regulate the impact of market forces on the environment. The governance interventions are however reactive with little impact on social and behavioural changes. The following RECP-relevant impacts were projected by 2025:

Water:

- Careful communal decisions about water resources are made; how to share water rights, build water infrastructure, investing in appropriate water exploration and management technologies.
- People learn to be much more efficient in their use of water.

Chemicals:

- Chemical production declines, pollution declines, but clean up also regresses.
- Continued and abundant use of chemicals banned in commerce in developing countries.
- Eventual greening of domestic manufacturers services as a model for the region.

Urban Sprawl:

- Greater demand for mass transit and affordable models of “clean” transport.
- Sprawl abates, people downsize.

Biotechnology:

- Organic agricultural and community agriculture replace globalised and high tech agricultural technology.

Climate Change:

- A domestic level, smaller vehicles, reduced energy consumption and greenhouse gas emissions.
- Greenhouse gas emissions continue to rise but have partially abated.
- Reduced demand for wood products lead to public interest in reforestation in anticipation of an eventual return to high demand with an improving economy.

The Fortress World Scenario

In a Fortress World Scenario, a few select elite benefit from environmental goods and services at the expense of poor vulnerable masses or regions. They secure themselves in enclaves in which they attempt to integrate environmental conservation whereas the majority of the population live in degraded ecosystems. The scenario projects a grim picture by 2025 with the following RECP-relevant impacts:

Water:

- Absence of economically achievable and innovative technologies for waste treatment and disposal.

- Drugs people use appear in water supply as waste products.
- Further degradation in water quality due to uncontrolled non-point source pollution.
- Huge increases in human and animal waste as population increases.
- Waterborne diseases, pathogens increase.
- Significant financial needs associated with maintenance and improvements to water infrastructure are ignored.
- Water shortages lead to conflict.

Urban Sprawl:

- Developments lead to reservoir contamination.
- No comprehensive transport solutions are developed.

Biotechnology:

- Minimal progress made in transforming technologies.

Climate Change:

- Greenhouse gas emissions continue to rise, but partially abate with lower growth
- No transitions are made to more energy efficient technologies.

The Great Transition Scenario

In the Great Transition Scenario, proactive policies and behaviour change characterize natural resources management with popular participation of all stakeholders. The scenario presents opportunities for the integration of social, economic and environmental goals. The scenario projects a particularly promising projection of achieving MDG and Vision 2020 targets. The following RECP-relevant impacts are projected by 2025:

Water:

- Chemical production increases, but a shift occurs towards “green chemistry”.
- Scientific progress makes possible major improvements in understanding the health and environmental impact of chemicals in the environment.

Urban Sprawl:

- Development of green transportation and manufacturing systems slashes air pollution from mobile sources, but encourages continuation of auto-orient, low density development.
- Nearly all problems associated with sprawl are checked: from loss of wetlands and fragmentation of ecosystems to escalating infrastructure costs and weakening of community life.

Biotechnology:

- Rwanda adopts biotechnology with shifts from “for or against” biotechnology to new concepts of alternative “biotechnology development paths”, some of which are highly problematic while others are promising in terms of health and environmental impacts.
- Nanotechnology is still on the horizon, but there is extensive discussion of potential uses for environmental remediation, clean energy, and zero waste manufacturing.

Climate Change:

- Shift towards higher energy efficiency, fuel cells, renewables and wellhead reforming of natural gas (in the Lake Kivu methane gas exploitation) with CO₂ re-injection, begins to reduce CO₂ emissions.
- Rwanda joins affluent nations in serious efforts to minimize climate change.

The SOE puts forward policy messages and makes recommendations of policy options for action for each theme assessed, for the attention of decision-makers in the respective sectors. The recommendations that have direct relevance to RECP promotion are listed below while the summary of policy recommendations are provided in Annex I.

1.2.2 RECP-Relevant Policy Recommendation of the Rwanda SOE 2009

Environment and economic development

- Institutionalize the integration of environment into policies, plans and programmes as provided for in the Environment Management Policy.

Climate change and natural disasters

- Coordinate efforts within and between governments, private sector and civil society in promoting adaptation to climate change and sustainable development through sharing ideas. This will encourage innovation and maximize the efficiency with which limited resources are used.

Industry and mining

- REMA should effect the provision of the Mine and Geology Policy on its statutory obligation to study the impacts of mining and quarries on the environment with the view to ensuring that the existing laws and regulations on mining are complied with.
- The Cleaner Production programme should be expanded in order to ensure that expanded industrial production brings benefits to industry, the economy and the environment.

Environmental policies, legislation and institutional arrangements

- Increase the knowledge and awareness of the general public on environment laws and policies in order to facilitate public participation in the EIA public hearings in particular, and in public decision making, in general.

1.3 RECP

Resource Efficient and Cleaner Production (RECP) is the continuous application of an integrated preventive environmental strategy to processes, products and services to increase efficiency and reduce risks to humans and the environment. It specifically works to advance the three dimensions of sustainable development in an integrated manner, by catalysing:

- Production Efficiency – through optimization of the productive use of natural resources (materials, energy, water) at all stages of the production cycle.

- Environmental Management - through minimization of the adverse impacts of industrial production systems on nature and the environment.
- Human development – through minimization of risks to people and communities, and support to their development.

The Joint United Nations Environment Programme (UNEP) and United Nations Industrial Development Organization (UNIDO) Programme on RECP builds upon achievements and lessons learned from establishing National Cleaner Production Centres (NCPCs) since 1994. Activities are underway in 47 countries to put Cleaner Production (CP) on the agenda of industry and government, train technical staff and foster implementation of CP options and policy change.

1.4 Resource Efficient and Cleaner Production in Rwanda

RECP was introduced in Rwanda in 2005 through a pilot project that was implemented by Rwanda Environmental Management Authority (REMA) with support from UNEP. The aim of the pilot project was to sensitize policy and decision-makers about the need for developing and implementing cleaner production programmes, demonstrate the benefits of applying cleaner production methods and approaches in industries and prepare the basis for the establishment of a National Cleaner Production Centre (NCPC) in Rwanda. Besides conducting national seminars and public awareness programmes, the project conducted a series of industrial training that led to the development and implementation of cleaner production programmes in nine industries. It also led to the preparation of the project document for the establishment of the Rwanda National Cleaner Production Centre which was submitted to the Ministry of Industry.

Based on the outcome from the pilot project, the Rwanda Resource Efficient and Cleaner Production Centre (RRECPC) was established in 2008 as a joint project between UNIDO and the Ministry of Industry and Commerce (MINICOM). The centre has since recorded achievements in awareness raising, domestic waste assessments, operating a mobile briquette-making demonstration machine as well as having introduced RECP management strategies in some pilot industries. In recognition the Hon Minister, MINICOM called on the Rwanda RECP Centre to expand its activities to involve more enterprises. However, it was recognized that the centre still lacks a mainstreamed institutional framework as a Rwandan agency.

In response to the request UNEP and UNIDO recognized the need for an institutional framework to mainstream RECP into all sectors of the Rwandan economy as well as societal day-to-day functioning, and developed a three-year joint proposal for the Rwanda Resource Efficient and Cleaner Production programme for 2010-2012. The Joint Programme Proposal for the Rwanda Resource Efficient and Cleaner Production Programme (RRECPP) is part of the Environment component of the 'One UN Programme' in Rwanda. The overall objective of RECP is to improve resource productivity and environmental performance of businesses and other organizations; thereby contributing to sustainable industrial development and sustainable consumption and production for Rwanda's transitional economy.

Over the years, the National Cleaner Production Programme in Rwanda, which later developed into Rwanda Resource Efficient and Cleaner Production Programme (RRECP), has registered the following progress towards resource efficient and cleaner production:

- Awareness raising and training programmes were organized for local experts on Cleaner Production, in 2008 and 2009.
- A domestic waste situation analysis has been carried out in the Southern province and Kigali City.

- Movable demonstration equipment for the production of high quality briquettes from suitable bio-waste has been acquired.
- RRECPC has assisted five factories in Kigali City in self assessment for RECP compliance. These included: UTEXRWA - textiles industry, Volta-super, Mironko plastics, Inyange soft drink plant in Kigali and Rubilizi Dairy.
- A complete Cleaner Production intervention project was carried out in UTEXRWA which resulted in significant savings of raw materials, water and energy consumption.
- A UNIDO-UNEP joint Programme project document on RECP developed and submitted for funding through One UN.
- A summary of institutions involved in the promotion and practice of RECP in Rwanda are featured in Annex 2.

1.5 Contents and Structure of the Report

UNEP is taking the lead on implementing the policy component of the programme which will be focusing on developing a strategy for mainstreaming RECP in the country's national policy and strategy frameworks and promoting the establishment of the institutional framework for RECP advocacy and promotion.

This report discusses Rwandan policies and strategies and the respective provisions and articles that are particularly relevant to the promotion of RECP. The description under each section highlights the strategic entry points that each of them provides for RECP and the possible limitations they may have for mainstreaming.

Chapter 2 of this report makes a detailed review of the Rwanda Vision 2020 and the Economic Development and Poverty Reduction Strategy 2008-2012 and sectoral policies, legislation, plans, programmes and strategies that influence production sectors in the context of potential entry points as well as existing constraints for the promotion of RECP in Rwanda. The review covers the sectors of agriculture, environment and natural resources, water and sanitation, industry and SMEs based on a desktop study and consultations with sectoral policy and technical level stakeholders as Annex 10.

Chapter 3 presents a proposal based on the UNEP programmatic approach that includes recommendations of an institutional and policy integration framework for mainstreaming RECP from sector focal point persons at the technical stakeholder level and from Cabinet Ministers and Agency Heads at the policy level. The proposed institutional and policy frameworks and recommendations for economic and fiscal incentives, capacity building and support for SMEs as well as information and public education form the basis for the proposed mainstreaming strategy for RECP in Rwanda.

2. REVIEW OF EXISTING POLICY AND STRATEGY REGIMES IN RWANDA

The first element of work under the policy component is to conduct a detailed assessment of the existing policy frameworks and develop a national strategy for mainstreaming resource efficiency and cleaner production in national policy frameworks. This section includes a detailed review and assessment of RECP related content in currently enacted governmental policies in Rwanda. The section starts with a brief overview of the policy development process. This is followed by the review of the principal national policy and strategy frameworks that are guiding the country's development process. The final sub section looks at the sectoral policy and strategy frameworks that are of some relevance to the promotion of RECP in the country. The review highlights the relevant provisions that can be used as strategic entry points for the promotion of RECP and indicates the possible limitations of the policies and strategies. The following are the key policies and strategies that are covered under the policy review.

National policies and strategies:

- Rwanda Vision 2020.
- Economic Development and Poverty Reduction Strategy (2008-12).

Sectoral policies and strategies:

- Strategic plan for Transformation of Agriculture, 2009-12.
- National Policy and Legislation for Environment.
- Rwanda Water Policy, legislation and strategy.
- National policy and strategic plan for industry.

2.1 Policy Development in Rwanda

The Cabinet is the ultimate policy decision-making institution in the Republic of Rwanda following a rigorous process of policy development and approvals. According to the Government of Rwanda Cabinet Manual published by the Ministry of Cabinet Affairs of the Office of the Prime Minister (MINICAAF), policies originate mainly from the need by the different sectors to implement the national development *Vision 2020*, the Government Programme, the Economic Development and Poverty Reduction Strategy (EDPRS), internationally agreed upon objectives or programmes such as the MDGs or NEPAD, the regional integration agenda of the EAC, the President's priorities, the desire to address new challenges or take advantage of new opportunities.

It therefore follows that formulation and development of Government policy and strategy in Rwanda is a competence of sectoral Ministries. It is however common practice for an agency within a Ministry to be delegated to initiate the development of a policy, strategy, law or regulation.

The Cabinet Manual stipulates four stages for approval that involve: (1) Submission of a policy proposal by the relevant Ministry, (2) Analysis of the proposal by the Cabinet Secretariat that provides peer-review and editorial oversight to ensure the highest quality, (3) Discussion of the policy proposal the Inter-Ministerial Coordination Committee for prior analysis of more complex matters and consensus development among Ministries that would be affected by the proposal and (4) Cabinet decision on the policy proposal.

Diagram 1: Stages in the Cabinet Cycle**Figure 1: Cabinet cycle for approving policy proposals (Source: Republic of Rwanda Cabinet Manual)**

The Cabinet Manual provides guidelines for policy development, articulating the need of thorough research to develop a deep and accurate understanding of the current situation, the causes and symptoms of problems. Results of the research also enable the setting of a strategic direction that defines the vision for the desired state of the future and sets short, medium and long term objectives for achieving the vision.

The manual also articulates the need for the identification and analysis of different policy options and respective policy instruments for achieving the chosen strategic direction. Guidance is provided on evidence based rigorous approaches in appraising for the most suitable, feasible and acceptable policy options. Policy proposal put to Cabinet for consideration are required to be first presented as a consultation document in a Green Paper, then submitted as an authoritative report addressing a specific problem and proposing a concrete action plan to solve it in a White Paper.

In this regard, all White Papers submitted for the consideration of Cabinet must be accompanied by an implementation plan, providing details of accountable person at Ministerial and official levels, work plan and milestones, operational management, decision-making process for changing the implementation plan, feedback mechanism for beneficiaries and interfaces with other Ministries and stakeholders, risks and constraints, human and financial resource requirements, impact of new policy on existing work practices and its communication method and possibilities for international benchmarking.

All policy proposals submitted to Cabinet must demonstrate thorough consultation of stakeholders within and outside the public sector, providing details of who was consulted, their view as well as any unresolved differences. The Cabinet Manual provides guidance on who, when and how to consult as well as providing evidence for consultation.

Due consideration should be given to how the strategy proposed herein for mainstreaming RECP into existing policies and strategies should be developed as a Cabinet Green and White Paper in order to generate adequate attention and scrutiny for providing awareness and knowhow to the decision-makers of the benefits of RECP in the achievement of sustainable development and poverty reduction.

2.2 National Policies and Strategies

2.2.1 Rwanda Vision 2020

The Vision seeks to fundamentally transform Rwanda into a middle-income country by the year 2020. This will require achieving annual per capita income of US\$ 900 (US\$ 520 in 2009), a poverty rate of 30% (38% in 2009) and an average life expectancy of 55 years (50 years in 2009).

The Vision acknowledges interdependencies and complementarities between different policies and recognizes critical requirements that need to be in place such as adequate skills, infrastructure and financial services for mutual success.

Vision 2020 prioritizes key issues into the promotion of macroeconomic stability and wealth creation to reduce aid dependency in the short term, transforming from an agrarian to a knowledge-based economy in the medium term and creating a productive middle class and fostering entrepreneurship in the long term.

Aspirations of the Vision are articulated around the following six pillars interwoven with cross-cutting issues.

1. Good Governance and a Capable State:

- Rwanda to be open to the world, including its own Diaspora.
- Rwandans to share the same vision for the future and ready to contribute to social cohesion, equity and equality of opportunity.
- Country to be a capable state, characterized by the rule of law that supports and protects all its citizens without discrimination.
- State to be dedicated to the rights, unity and well-being of its people and will ensure the consolidation of the nation and its security.
- Small but effective, flexible public sector able to lay the foundations for Rwanda to be competitive in the modern international economy.
- Ensure good governance, which can be understood as accountability, transparency and efficiency in deploying scarce resources.
- State respectful of democratic structures and processes and committed to the rule of law and the protection human rights in particular.
- People's participation at the grassroots level to be promoted through the decentralization process, whereby local communities will be empowered in the decision making process, enabling them to address the issues which affect them the most.
- Reconstruction of the nation of Rwanda and its social capital, anchored on good governance and an effective and capable state is considered a minimal condition to stimulate a harmonious development of other pillars.

2. Human Resource Development and a Knowledge Based Economy:

Education:

- Government will organize intensive teacher training programs.
- Major emphasis on vocational and technical training in the fields of technology, engineering and management targeted at secondary school leavers as well as various sections of society with particular emphasis on youth and women to encourage skills development.
- Micro-credit schemes will be promoted specifically to extend finance to self-employed young technicians.

- Special emphasis will be given to innovative, small-scale entrepreneurs.
- To promote efficiency and continuous upgrading of skills.
- Appropriate programmes to be launched in the national institutions aimed at on-the-job training, in-service training and distant learning.
- Properly link education policies, with sector development and labour policies in order to have a skilled labour force for the development of secondary and tertiary production sectors.

Health and population:

- Reduce the fertility rate within 20 years from 6.5 (in 2000) to 4.5 children and the population growth rate to 2.2%.
- Reduction in the infant mortality rate from 107 (in 2000) to 50 per 1000 and the maternal mortality rate from 1070 (in 2000) to 200 per 100.000.
- Increase of life expectancy from 49 (in 2000); 50 in (2009) to 55 years.
- Malaria and other potential epidemic diseases to be controlled.
- AIDS prevalence to be reduced from 11.2% (in 2000) to 8%.

3. A Private Sector-led Economy:

- Develop a comprehensive privatization policy that will help reduce costs and prices to widen consumer choice.
- Act as a catalyst, ensuring that infrastructure, human resources and legal frameworks are geared towards stimulating economic activity and private investment.
- Develop robust financial services sector that is able to avail the necessary credit for both formal and informal sectors (SMEs) and that will facilitate the creation of 1.4 million jobs projected requirement outside agriculture at the estimated 13 million population level in 2020.

4. Infrastructure Development:

Vision 2020 articulates that infrastructural rehabilitation and development lowering the costs of doing business in Rwanda, which will attract domestic and foreign investment through the following targets:

Land Use Management:

- Institute modern land law providing security of tenure and freedom of exchange.
- Harmonious policy of grouped settlements (iMidugudu) based on economic activity equipped with basic infrastructure and services serve as an entry point into the development of non-agricultural income generating activities.

Urban development:

- Until 2010, each town to have regularly updated urban master plans and specific land management plans.
- Develop basic infrastructure in urban centres and in other development poles, enabling the decongestion of agricultural zones.

- Proportion of those living in towns and cities will increase from 12% to 30% (from 5% in 1995).
- Income differential between towns and rural areas should remain within reasonable proportions, due to the decentralization of economic activities to the country.
- Land Consolidation to create adequate space for modern and viable farming.

Transport:

- Regional rail extension to Isaka, Tanzania and an extension to the Ugandan Railway system.
- Combined rail and water system that can link to the Banguela Railway to be considered.
- Second airport capable of serving, as a regional hub for the great lakes region will be developed.
- Extended and improved road network.

Communication & ICT:

- To liberalize the telecommunication sector and increase coverage, the communication policy will take advantage of the small size of the country, its high population density and the single local language to attract investors.
- By 2020, Rwanda projects to have internet access at all administrative levels, for all secondary schools and for a large number of primary schools.
- Telephone services will be widespread in rural areas and efficiency of public services will have increased through the application of e-government principles.

Energy:

- At least 35 % of the population to be connected to electricity (up from the current 6%) by 2020.
- Consumption of wood to decrease from the current 94% (in 2000) to 50% of national energy consumption by 2020.
- Water.
- Increase the rate of access to potable water by 2.5 percentage points, annually from 52% (in 2000) so that the whole of the Rwandan population will have access to potable water by 2020.

Waste management:

- Rural and urban areas to have sufficient sewerage and disposal systems.
- Each town to be endowed with an adequate unit for treating and compressing solid wastes for disposal.
- Households to have mastered and be practicing measures of hygiene and waste disposal.

5. Productive and Market Oriented Agriculture

- Institutional and legal reforms that ensure security of land ownership.
- Development of a market in land assets.

- Extensive research and extension services.
- Investment in rural infrastructures.
- Use of high yielding varieties and intensive input use, especially fertilizers.
- Promotion of agro-based manufacturing.
- Environmental control measures to halt the decline in soil fertility.
- Rural Financing Schemes and Markets.

6. Regional and International Economic Integration

- Pursue an open, liberal trade regime, minimizing barriers to trade as well as implementing policies to encourage foreign direct investment.
- Adopt policies to promote competitive enterprises, exports and entrepreneurship rather than protecting failing industries cannot be overemphasized.
- Accessing larger regional markets through a program of investing in infrastructure to promote Rwanda as a communication and telecommunication hub.
- Taking advantage of Rwanda's comparative strategic position in terms of "entrepot" functions in trade and commerce.
- Consolidate Rwanda's niche in services and communication sectors and take advantage of growing regional cooperation in the Great Lakes/Eastern African Region through Export Processing Zones, coupled with the industrial reforms.

Cross-cutting issues

Chapter 4 further describes protection of the environment and sustainable utilization of natural resource, gender equity, and science and technology including ICT as cross-cutting areas for achieving the six-pillars of the Vision.

Noting that women make up 53% of the Rwandan population and participate in subsistence agriculture more than men; that women usually feed and provide care for the children and ensure their fundamental education; that until recently, girls were the minority in secondary schools, women had little access to the opportunities available to men and they were poorly represented in decision-making positions. Vision 2020 articulates the following targets to achieve gender equality sustain natural resources and environment and attain adequate levels of science, technology and ICT:

7. Gender Equality

- Continuously updating and adapting laws on gender.
- Support education for all.
- Eradicate all forms of discrimination.
- Practice a positive discrimination policy in favour of women.
- Fight against poverty.
- Integrate gender as a cross-cutting issue in all development policies and strategies.

8. Natural Resources and Environment

- Apply adequate land and water management techniques, coupled with a sound biodiversity policy. *This cross-cutting target is well elaborated in the proceeding section under the EDPRS implementation framework.*

9. Science Technology and ICT

- Rwanda projects to have adequate, highly skilled scientists and technicians to satisfy the needs of the national economy.
- Generate, disseminate and acquire scientific skills as well as technological innovations, in addition to integrating them into the social and economic development drive.
- Develop the teaching of science and technology at secondary and university levels.
- Facilitate the creation of high and intermediate technology enterprises and develop access to ICT down to the administrative sector level, in accordance with the national ICT plan.

The Vision 2020 is implemented through the 5-year MDG-based national development programme, the Economic Development and Poverty Reduction Strategy (EDPRS) that integrates all government ministerial sectors to deliver on their respective mandates to common goals and objectives.

2.2.2 EDPRS

The EDPRS was elaborated in three distinct phases. The first phase involved self-evaluations of the PRSP1 conducted by each sector working group and each District, together with an independent evaluation conducted by external consultations. Emerging priorities from these evaluations informed the 2007 budget elaboration. In addition, based on these assessments, each sector subsequently set higher level objectives and targets for EDPRS as well as the means of achieving them through a logical framework exercise and a costing exercise. Finally, each sector was required to produce a summary strategy statement, which was compiled into the EDPRS document by MINECOFIN, under the direction of the Steering Committees.

The EDPRS 2008-12 outlines the following three flagship programmes to achieve its goals and designates implementing lead sectoral Ministries:

Growth for Jobs and Exports with six policy interventions:

- Develop skills and capacity.
- Improve the infrastructure especially energy, transport and communications.
- Promote science, technology and innovation (through assisting private sector to innovate).
- Widen and strengthen the Financial Sector.
- Promote opportunities in the three sectors of the economy for productive employment.
- Improve governance to address the challenges associated with micro risks (anchored in the Governance Flagship in all sectors).

Vision 2020 Umurenge with three policy interventions:

- Public works (through creation of off-farm employment opportunities).

- Credit packages (through monetization/formalization of the economy).
- Direct support (through effectiveness of social protection).

Governance with six policy interventions:

- Security and cooperation.
- Justice.
- Unity and reconciliation.
- Decentralization, citizen participation and empowerment, transparency and accountability.
- Public Sector human, fiscal and policy-making capacity.
- Centre of excellence in soft infrastructure.

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The EDPRS as an MDG-based development strategy provides for the mainstreaming of environmental protection and the sustainable utilization of natural resources as cross-cutting in all sectoral strategies of SWGs and operational programmes of SWAPs.

Cross-cutting issues on gender, HIV/AIDS, the environment and social inclusion are designated as complementary sectoral interventions to achieve the EDPRS goals. The environment cross-cutting issue is covered under the subsection "Manage the environment and ensure optimal utilization of natural resources". The EDPRS recognizes that the Rwandan economy is primarily dependent on natural resources with over 87% of the population depending on subsistence agriculture for its livelihood, and more than 94% using firewood as their primary source of energy for both domestic and industrial uses. It is further acknowledged that the increasing population pressure on land and forest resources places biodiversity under threat with potentially adverse impacts on export revenue from tourism and other ecosystem services.

Key cross-cutting environmental interventions outlined in the EDPRS 2008-2012:

- Rehabilitation of degraded wetlands and other protected areas to ensure the preservation of biological diversity.
- An incentive framework to be put in place to implement the National Programme for Adaptation on Climate Change (NAPA).
- Development of a Clean Development Mechanism.
- Development and dissemination of guidelines for conducting Strategic Environment Assessments (SEAs) and Environmental Impact Assessments (EIAs).

Specific indicators relevant to RECP mainstreaming as featured in the EDPRS 2008-2012 monitoring and evaluation matrix (Annex 3) tabulated against progress towards implementation in Table 1 below as reported in Joint Sector Reviews of the respective sectors. It would seem that implementation agencies of the respective ministerial sectors have made changes in EDPRS target which have not been updated in the EDPRS indicator matrix and therefore achievements reported are not matched with set targets and are shown in the table as "on-going" entries. Some ministerial sectors targets have are not set in the indicator matrix.

Table 3 RECP-Relevant Targets for EDPRS 2008-2013 Versus Implementation Status

RECP Relevant Targets - Environment	Status of Implementation
<ul style="list-style-type: none"> Begin distribution of environmental inspection checklists to the lowest local governance administrative level -the cell in all districts – 2008 target 	<ul style="list-style-type: none"> On-going
<ul style="list-style-type: none"> Database of all regulated substances updated annually and accessible to public – 2009 target 	<ul style="list-style-type: none"> On-going
<ul style="list-style-type: none"> At least 10 out of 16 environmental regulations and guidelines functioning at central and decentralized institutions to facilitate investments – 2010 target 	<ul style="list-style-type: none"> 5 Regulations, 7 Sector Specific guidelines for EIA are available and functioning (see section 2.3.2.3)
<ul style="list-style-type: none"> Five degraded ecosystems mapped, assessed and rehabilitated (Gishwati, Mukura, Rugezi, Kamiranzovu, Nyabarongo-Akagera network including Gikondo industrial area) - 2011 target 	<ul style="list-style-type: none"> Three ecosystems mapped (Rugezi, Kamiranzovu, Nyabarongo-Akagera); One ecosystem fully rehabilitated; One ecosystem in progress of rehabilitated (Nyabarongo-Akagera)
<ul style="list-style-type: none"> Increase number of projects compliant to national environmental standards to 95% approval rating for EIA certification – 2012 Target 	<ul style="list-style-type: none"> On-going
RECP Relevant Targets - Agriculture	Status of Implementation
<ul style="list-style-type: none"> % of livestock in intensive systems (16 in 2005/6 to 60 in 2012) 	<ul style="list-style-type: none"> On-going
<ul style="list-style-type: none"> Number of farm households per extension officer (1:3,000 in 2005/6 to 1:1,500 in 2012) 	<ul style="list-style-type: none"> On-going
RECP Relevant Targets - Infrastructure	Status of Implementation
<ul style="list-style-type: none"> Number of households with access to electricity (70,000 in 2005/6 to 200,000 in 2012) 	<ul style="list-style-type: none"> Connected households and enterprises increased to 159 516, beyond 2009-2010 target Electricity generation increased from 67 MW in 2008 to 84 MW in 2010
<ul style="list-style-type: none"> Draft policy note for reform of electricity taxes and subsidies- 2009 target 	<ul style="list-style-type: none"> Tariff study completed and submitted by Oct 2010
<ul style="list-style-type: none"> Rules and Regulations for the Electricity and Gas sector adopted – 2009 target 	<ul style="list-style-type: none"> On-going
<ul style="list-style-type: none"> Privatization of management of rural based power plants – 2010 target 	<ul style="list-style-type: none"> On-going
<ul style="list-style-type: none"> Privatization of Power Plants managed by National Power Utility (unbundling process) – 2011 target 	<ul style="list-style-type: none"> On-going

The EDPRS as aligned with Rwanda's Vision 2020 represents a 5-year comprehensive development agenda of the nation and is implemented through joint collaboration of state, development partners (donors) and private sector and civil society stakeholders organized in Sector Working Groups (SWGs) under the leadership and guidance of the Ministry of Finance and Economic Planning (MINECOFIN) which provides clear terms of reference. The EDPRS is implemented by fifteen Sector Working Groups under three clusters: Economic, Social and Governance. It should be noted that Environment, HIV/AIDS and Gender are designated as cross-cutting issues that have to be mainstreamed in all SWGs under the leadership of the Ministry of Environment and Lands (MINERENA), The Ministry of Health (MINISANTE) and Ministry of Gender and Family (MIGEPROF) respectively. Table 3 shows the clustering of SWGs and their respective designated lead Government of Rwanda institution.

Table 4 SWG Clusters and Lead Government of Rwanda Institution (MINECOFIN, 2009)

Sector Working Group by Cluster	Lead GOR Institution
Cluster 1: Economic Sector	
1.1 Macro & Financial sector	MINECOFIN
1.2 Private Sector Development	MINICOM
1.3 Infrastructure including sub sectors of:	
1.3.1 Energy	MININFRA (Energy & Transport)
1.3.2 Transport	
1.3.3 Information Communication Technology (ICT)	MININFRA (ICT)
1.4 Agriculture	MINAGRI
1.5 Environment & Natural Resources	MINERENA
Cluster 2: Social Cluster	
2.1 Health	MINISANTE
2.2 Water & Sanitation	MININFRA
2.3 Education	MINEDUC
2.4 Social Protection	MINALOC
2.5 Youth	MINIYOUTH
2.6 Sports and Culture	MINISPOC
Cluster 3: Governance Cluster	
3.1 Public Finance Management (PFM)	MINECOFIN
3.2 Justice, Reconciliation, Law and Order (JRLO)	MINIJUST
3.3 Decentralization, Citizen Participation, Employment, Transparency & Accountability (DCPETA)	MINALOC
Cross Cutting Issues	
4.1 HIV/AIDS	MINISANTE
4.2 Environment	MINERENA
4.3 Gender	MIGEPROF

Each SWG is chaired by a Permanent Secretary of a designated Lead Ministry representing the Government of Rwanda and co-chaired by a designated (rotating) Lead Donor. A Joint Sector Review (JSR) forum is convened by the SWG in the first and third quarter of the fiscal year. The first quarter JSR is required to focus on the performance and budget execution of the SWG in the previous fiscal year while identifying priorities for preparing the budget for the following year. The third quarter JSR focuses on the midyear Sector Strategy progress report and updating the EDPRS results. The SWG reports directly to MINECOFIN through its chair. SWGs hold meetings at least quarterly.

The Sector Working Groups are required to develop and update joint Sector Strategic Plans and Logical Frameworks, develop, update and validate Monitoring and Evaluation frameworks, conduct Joint Sector Reviews, review and validate Public Expenditure Review reports and develop Sector-Wide Approaches (SWAPs). SWAPs coordinate the support of development partners in the joint sector, ensuring implementation of the sector strategy, harmonize all efforts to a common objective and coordinate planning as well as monitoring and evaluation. SWAPs are also designed to strengthen stakeholder partnership and national ownership of the sector development strategy.

Sector Strategic Plans are formulated jointly by the sectors making reference of policy, legislative and regulatory mandates of their respective sectors. Special budget provisions are made for implementing operational plans for mainstreaming cross-cutting issues including environmental sustainability, gender equity and HIV/AIDS of joint Sector Strategic Plans through SWAPs.

Rwanda Poverty and Environment Initiative (PEI)

The EDPRS recognizes that developing an adequate legal, regulatory and policy framework for managing the environment is important. It is however observed that unless this is matched by the political will and sufficient resources to strengthen and build the capacity of those institutions charged with implementing environmental policy, there will be little impact on the current situation.

Having noted inadequacies in the integration of environment into national development planning processes in previous Poverty Reduction Strategy Papers, REMA, in collaboration with the Ministry with Environment and UNEP developed the Rwanda Poverty and Environment Initiative (PEI) aimed at enhancing the contribution of sound environmental management to poverty reduction, sustainable economic growth and achievement of the Millennium Development Goals.

One of the studies undertaken to support this objective was the Economic Analysis of environmental degradation based on case studies of Gishwati forest and Rugezi wetland. One of the significant findings of the study was 167% rise in the per capita cost of electricity resulting from the degradation of both Gishwati forest and Rugezi wetland for the 2% of Rwandans who have access to electricity. The interruption of the role played by the Rugezi wetland as a hydro-electric power source led to electricity supply shortages in Rwanda in the middle of the last decade. In this case, the cost of fuel required to run generators to provide replacement electricity to the national power grid was around US\$65,000 per day that characterized Kigali with long and frequent power cuts by mid 2006, a fact noted as a reference in the EDPRS. It was also noted that the energy crisis was happening at the same time as when there was a charcoal shortage. Most of the shortage is caused by deforestation due to exploitation of forests for industrial purposes but more significantly, provision of fuel wood to about 95% of the population.

The results from the study were instrumental in the analysis of existing planning mechanisms and facilitated the identification of priorities within the environment sector during the formulation of second generation EDPRS (2008-2012). The PEI project developed indicators that underpin the wealth base on which the poor derive their food, income and employment; health is an important determinant of human well-being indicated by the quality of water, air and settlements as well as vulnerability and social security.

The following Poverty and Environment indicators with relevance to RECP were developed for integrating in the EDPRS:

- % of households & industries using fuelwood as a source of energy for cooking.
- % of Households using energy saving stoves.

- % of urban population that are connected to sewage systems.
- Incidences of water stress.
- Incidences of water-use conflicts.
- % of households with access to adequate sanitation facilities.
- % of poor urban households within 200 metres of solid waste skip.
- Frequency of solid waste collection/ transportation in urban poor areas.
- % of rural households with solid waste disposal facility.
- % of industries & other commercial entities with waste water treatment facilities.
- % of established industries which have undergone environmental audit.
- Presence of adequate legal & regulatory framework for pollution control.

The EDPRS is an effective strategy for implementation of the government development programmes in an integrated manner with budget leverage. It requires all sectors organized in Sector Working Groups to deliver on their respective mandates cooperatively in Sector Wide Approaches as implementation instruments for joint Sector Strategic Plans. Furthermore, all joint Sector Strategic Plans are required to demonstrate how cross-cutting issues are integrated into the plans and implementation SWAGs before operational budgets are disbursed. The following limitations and potential opportunities to the promotion and mainstreaming of RECP in the Vision 2020 and EDPRS are inferred from the review:

Limitations:

- Environmental sustainability could have been better incorporated within the proposed sectoral actions under the policy matrix.
- It is left up to the sectors and their respective SWGs to interpret and develop cross-cutting issues into effective outcomes. Outcomes may be ineffective due to inadequate appreciation of the issue in terms of perceived prioritization, level of technical knowledge and skills and other factors.

Potential entry points:

- Science & Technology: Establishment of technology diffusion funds and establishment of science and technology centres.
- Private sector: Establishment of regional industrial parks and free-trade zones.
- Education: Development of Technical and Vocational Education and Training (TVET) Policy.

2.3 Sectoral Policies, Legislation and Strategies

2.3.1 Strategic Plan for Transformation of Agriculture 2009-2012

The Strategic Plan for Agricultural Transformation in Rwanda for 2009-2012 referred to as the PSTA II is a further elaboration of the earlier plan PSTA I, for alignment with the EDPRS, Vision 2020 and the National Investment Strategy. The PSTA II also takes into account the Decentralization Policy of 2000, which seeks to involve local administrations more directly in the development process. The PSTA II objectives are defined here below.

Overall Objective:

“Agricultural output and incomes increased rapidly under sustainable production systems and for all groups of farmers, and food security ensured for all the population”.

Specific Objective:

“Increase output of all types of agricultural products with emphasis on export products, which have high potential and create large amounts of rural employment; this under sustainable modes of production”.

PSTA II Programmes, sub-programmes and their respective “pillars of action” with relevance to the promotion and mainstreaming of RECP are provided in Annex 4, while listing here below those that provide a basis for potential key entry points:

SP 1.4 Irrigation Development

- Establishing the legal basis for water use rights and tenure rights for irrigation systems.
- Implementing pilots for pressurized irrigation on hillsides and “fertigation” systems.
- Organizing and training hillside farmers for water management, system maintenance, and management of finances for irrigation systems.

SP 3.1 Creating an environment conducive to business and entrepreneurship development and market access

- Accelerate the development of entrepreneurial capacity.
- Strengthen environment for agro-business, especially with reference to meeting international standards for export products.

Progress towards achieving PSTA II

In its Joint Sector Review, MINAGRI as the lead agency for the Agriculture sector reported progress with respect to the EDPRS strategic outcomes for June 2009 to March 2010. Once again these are not directly linked to the targets set in the EDPRS 2008-2012:

- Progress on policy actions for “Increased agricultural productivity”.
- Initiating 14 additional Land and Water Husbandry feasibility studies - fully met.
- Publishing the Land Consolidation Ministerial Decree - partially met (decree drafted and shared with stakeholders).
- Developing action plan for private sector fertilizer distribution – partially met (Action plan developed, to be validated).

- Extending fertilizer demonstration plot program to include at least 1 per sector in rural areas – fully met.

Challenges and Solutions as observed by MINECOFIN

Challenges:

- Seed sub sector remains weak.
- Aquaculture sector needs to be strengthened.
- Analysing the impact of policies on development of the agriculture sector needs to be reinforced.
- High postharvest losses.
- Increasing access to finance for farmers.
- Increasing the land area under irrigation.

Solutions:

- Form collaboration and joint initiatives to assist the development of the Seed sub sector.
- MINAGRI to Work with stakeholders to improve fish production and to substitute imports.
- Next household survey should assess the impact of production increases on poverty reduction.
- Increase focus on storage systems, particularly warehouse receipt systems.
- Focus on small scale irrigation for smallholder producers as well.

The transformation into a Market Oriented Agriculture is only achievable if driven by a Private Sector-led Economy both identified as two of the six pillars of Vision 2020. The Agriculture Sector Strategic Plan for 2009 - 2012 responds to this requirement, setting appropriate detailed programmes and lines of action to facilitate this. The following limitations to the promotion and mainstreaming of RECP compliant farming have been identified and potential entry points are recommended:

Limitations:

The potential for environmentally friendly farming such as organic farming for green products that leave a low carbon footprint is missing as the focus is only on efficacy of chemical fertilizer, pesticide and other inputs. Checks and balances seem to be aimed at chemical fertilizer, pesticide and other agrochemicals for efficacy with respect to plant nutritional and protection requirements only, neglecting impact on the environment and human health.

Potential entry points:

RECP concepts, technologies and practices could be promoted and implemented in most of the relevant sub-programmes and their respective line of actions mentioned above.

- Strengthen environment for agro-business, especially with reference to meeting international standards for export products.
- Implementing pilots for pressurized irrigation on hillsides and ‘fertigation’ systems.

2.3.2 National Policy & Legislation on Environment

2.3.2.1 Rwanda National Policy on Environment of 2003

The Rwanda National Policy on Environment of 2003 recognizes that the essential objectives of a national environmental policy are to reduce poverty, introduce long term planning and protection and management regulation of natural resources. In its introductory chapter, the policy gives a background to the evolution of environmental protection and natural resource management in Rwanda.

The National Policy on Environment sets the following principles and objectives:

- i) Every individual has the right to live in a healthy and balanced environment and has the obligation of safeguarding environmental health;
- ii) Economic growth in Rwanda should be based on a more rational utilization of resources and take into account the environmental dimension;
- iii) Active and effective participation of the entire population in the protection and management of environment;
- iv) Special attention should be paid to educational and awareness creation programmes in environment at all levels with a greater involvement of women and the youth;
- v) Introduction of the principle of prevention;
- vi) Introduction of the principle of polluter-pays;
- vii) Environmental impact should be analysed during consideration of developmental projects;
- viii) The principle of equality among generations and fair share in the utilization of resources should be respected;
- ix) Establishment of a favourable social and economic environment for the utilization of natural resources;
- x) Recognition of sub-regional, regional and global environmental interdependence.

Overall objective:

The overall objective of the Environment Policy is the improvement of man’s well-being, the judicious utilization of natural resources and the protection and rational management of ecosystems for sustainable and fair development of Rwanda.

The Environment Policy pays attention to each key sector in policy statements and strategic actions as featured in Annex 5. The following policy statements and strategic actions could be used as a basis for potential entry point in the promotion and mainstreaming RECP:

Policy statement on Water Resources

- To ensure that water is used in the various economic and social sectors without endangering environment.

Strategic actions:

- To promote programmes for the harvesting, storage and use of rain water.
- To promote regional cooperation in the management and equitable utilization of cross-border waters.

Policy statement on Agriculture, Livestock and Fisheries

- To promote environment friendly agro-pastoral and fishing methods and techniques.

Strategic actions:

- To develop environment friendly agricultural production systems.
- To create awareness among the population on the impact of agricultural inputs.
- To enhance the practice of livestock stabling.
- To promote environment-oriented irrigation.

Policy statement on Transport and Communications

- To ensure compliance with environment in all transport and communications activities.

Strategic actions:

- To ensure that land, lake and air transport regulations minimize pollution.
- To prevent air and soil pollution by emissions of gases and heavy metals from transport equipment.
- To promote the use of non-polluting sources of energy in the field of communication (replacing cell batteries).

Policy statement on Trade, Industry and Tourism

- To integrate environmental aspects in commercial and industrial activities and promote environment friendly tourism.

Strategic actions:

- To regulate the location and management of industrial and market sites.
- To establish a system of information on prohibited, controlled products and potentially toxic products.
- To encourage the use of biodegradable packing products and the recycling of waste matter.
- To control hygiene and cleanliness of markets, business areas and industrial sites.
- To promote less polluting transport and storage technologies and technologies for the elimination of industrial products and/or waste.
- To create awareness among tourists on the importance of environment quality.

Policy statement on Energy and Mining

- To increase energy supply while minimizing the negative impact on environment and ensure compliance with the environmental dimension in mining and quarrying activities.

Strategic actions:

- To promote diversification and utilization of alternative sources of energy (methane gas, solar, wind) and micro-hydro-electricity.

- To ensure compliance with international standards in the emission of greenhouse gases due to utilization of energy.
- To regulate the treatment of mineral waste so as to limit or eliminate water pollution if possible.

Policy statement on Education, Information and Research

- To give the country an educational, information, sensitization and environmental research promotion policy.

Strategic actions:

- To include environmental studies in school curricula at the primary, secondary and tertiary level.
- To promote environmental research and transfer of surveillance technologies.

Policy statement on Health and Sanitation

- To include health and sanitation at the centre of environmental issues.

Strategic actions:

- To establish a system for collection, transportation, repository and disposal of waste.
- To formulate a national strategy for specific management of chemical products and biomedical and industrial waste.

Policy statement Economic Planning

- To integrate the environmental dimension in economic planning.

Strategic actions:

- To take into consideration the impact and the cost of environment in socio-economic planning.
- To mobilize and allocate the necessary financial resources for the protection of environment.

Policy statement on Atmosphere, Climate and Disasters

- To take part in the establishment of a framework for early warning and management of natural and/or man-made disasters.
- To contribute to the establishment of a policy and legislation aimed at monitoring regularly climatic change and reduce to the strict minimum substances which pollute the atmosphere.

Strategic actions:

- To develop a policy for the control of socio-economic activities likely to affect the climate.

Policy statement on Gender, Youth and Environment

- To mainstream gender in the protection of environment.

Strategic actions:

- To ensure the involvement of men and women in the protection of environment.
- To facilitate access of women to natural resources and empower them to control their management.

2.3.2.2 Organic Law N° 04/2005 of 08/04/2005 on Environment

The National Policy on Environment is given effect by the Organic law n° 04/2005 of 08/04/2005 determining the modalities of protection, conservation and promotion of environment in Rwanda also originating in the Ministry of Environment with environment in its competence and implemented by the Rwanda Environment Management Authority (REMA).

The Organic law makes several provisions that are relevant for the promotion of RECP practices as outlined in Annex 6. The following are identified as provisions that can form a basis for mainstreaming RECP in the ENR sector:

- **Article 58:** The State shall take adequate measures to promote environmental education, training and sensitization in schools curricula at all levels. The Article stipulates that the creation of associations for the conservation of the environment may be encouraged and approved.
- **Article 71:** Any activity aiming at controlling soil erosion and drought, one that aims at afforestation and forestry, using renewable energy in a sustainable manner, using modern cooking stoves and any other means that can be used to protect forestry, may receive support from the National Fund for Environment.
- **Article 72:** The National Fund for Environment (FONERWA) may grant support to public services, associations and individuals in case they invest or put in place campaigns or carry out activities intended to fight against causes of pollution or support existing installations so as to match with the environmental quality standards, in accordance with instructions of competent authorities.
- **Article 73:**
 - Industries that import equipment which assist in eliminating or reduce gases like carbon dioxide and chlorofluorocarbons which intoxicate the atmosphere and those which manufacture equipment that reduce the pollution of the environment, are subject to reduction of customs duty on the equipment and for a period to be determined depending on the needs, and it shall be governed by the law concerning taxes and revenues.
 - Individuals and moral persons that undertake activities that promote environment are subject to reduction on taxable profits in accordance with the law concerning taxes and revenues.

2.3.2.3 Environmental regulations and guidelines

Environmental Regulations for Rwanda in the form of Ministerial Orders were gazetted for the effective implementation of environmental policy and legislation:

- Ministerial Order N° 003/2008 of 15/08/2008 relating to the requirements and procedure for Environmental Impact Assessment that includes the following aspects of RECP requirements:
 - EIA procedures and methodology.
 - Environmental Management Plan requirements for works and property developments.
 - Environmental Auditing requirements.
 - Ministerial Order N° 004/2008 of 15/08/2008 establishing the list of works, activities and projects that have to undertake an EIA.

- Ministerial Order N° 005/2008 of 15/08/2008 establishing modalities of inspecting companies or activities that pollute the environment.
- Ministerial Order N° 006/2008 of 15/08/2008 regulating the importation and exportation of ozone layer depleting substances products and equipment containing such substances.
- Ministerial Order N° 007/2008 of 15/08/2008 establishing the list of protected animal and plant species.

Guidelines:

General guidelines for Environmental Impact Assessment have been developed, published and disseminated by REMA.

- Sector-specific EIA guidelines have been developed for:
 - Housing
 - Roads
 - Hydropower
 - Water Resources Management
 - Wetland Management
 - Waste Management
- Environmental Auditing.
- Pollution Control and Management are being developed by MININFRA.
- SEA guidelines have also been developed and are under final review for publication and dissemination.

2.3.2.4 ENR Strategic Plan 2009-2013

In the five-year planning period 2009 to 2013, the Environment and Natural Resources (ENR) sector encompasses sub-sectors of Environment, Lands, Water Resources Management, Mines and Forestry under the leadership of the Ministry of Natural Resources (MINIRENA).

In November 2009, the Ministry was administratively split into the Ministry of Environment and Lands (MINERENA) and the Ministry of Forestry and Mines. The water portfolio was retained in MINERENA. Despite administrative structural changes that have occurred in the ENR sector, the implementing state institutions remain intact and retain their respective mandates. It is therefore worthwhile for the purposes of this review, to consider the various programmes as spelled out in the ENR Strategic Plan 2009-2013 against its Joint Sector Review.

Roles and responsibilities of the respective implementing institutions were defined as follows:

Ministry of Environment and Lands (MINERENA - formerly MINIRENA):

- Overall policy oversight, monitoring & institutional support.
- Coordination of resource mobilization, allocation and accountability.
- Coordination of Water Resources Management programme until a Water Resources Management Agency is established.

Rwanda Environment Management Authority (REMA):

- Overseeing the implementation of environmental law and policy through education and sensitization; law enforcement and monitoring, and capacity building support to other institutions.
- Ensuring that environmental sustainability principles are integrated in policies, plans and budgets in all sectors.

National Land Centre (NLC):

- Land administration and land tenure security through registration and land use planning both in the urban and rural areas.

National Forestry Authority (NAFA):

- Coordinating forest management and agro-forestry development programmes.

Rwanda Geology and Mines Authority (OGMR):

- Coordinating all activities relating to research and mapping of mineral resources.
- Developing and monitoring standards for large scale commercial and artisanal miners.
- Regulating mining activities.

The ENR is linked in a complex way to other sectors (health, agriculture, energy, tourism, housing, macroeconomic management, gender and social development) as will be reflected in the objectives and implementation programmes. The ENR Sector Strategic Plan (in former and current constitutions) is implemented through a Sector Wide Approach (SWAp) composed of the sub-sector implementing agencies.

The overall objective of the ENR sector joint strategy is to develop sustainable capacities to ensure that the environment and natural resources are utilized and managed productively in support of sustainable national development in line with the EDPRS targets, MDGs and Vision 2020 aspirations. The objective is implemented in eight programmes as outlined in Annex 7 with the following identified as a possible basis for potential key entry point in promoting and mainstreaming RECP:

- i) Sustainable Integrated Water resources management
 - a) Water quality monitoring
 - b) Regulating water utilization
- ii) Sustainable management of forest and biomass resources
 - a) Alternatives to wood and biomass products for energy sources.
 - b) Promoting agro-forestry.
- iii) Sustainable mining and mineral exploitation
 - a) Mining and mineral processing technology improvement.
 - b) Control of environmental pollution from mining.
 - c) Institutional capacity building for OGMR and for smallholder (artisanal) miners.
- iv) Environmental sustainability of development policies, programmes and projects at national and local level.

- a) Environmental mainstreaming across sectors particularly Agriculture, Energy, Infrastructure, Industry.

Policy, legal & regulatory framework for ENR management

- a) ENR legal & regulatory regimes harmonized with other EAC Countries.
- b) Institutional Capacity of ENR Governance - Improving sector programming & sectoral coordination (ENR SWAP developed & operationalized).

RECP-Relevant Achievements of ENR Objectives from the Joint Sector Review

Forest Resources Management:

- Draft of carbon policy available.
- National Action Plan to combat desertification validated by stakeholders.
- 29 district forest management plans completed.

Water Resources Management:

- The draft policy is available.
- Water quality monitoring has been carried out on 36 selected points on water bodies and wastewater discharge points country wide.

Mining:

- Regular monitoring of quarries.

Environment:

- Construction of 13 tanks at public schools located.
- Ministerial Orders (regulations) activities that pollute the atmosphere approved by Cabinet.
- Ministerial Order establishing special regulation relating to toxic waste disposal approved by cabinet.
- Draft Law determining organization, functioning and attributions of the National Fund for Environment in Rwanda (FONERWA) soon to be tabled in Parliament.
- EIA sectoral guidelines available.
- Final draft reports available the 2nd National communication under the UN Framework Convention on Climate Change (UNFCCC):
 - National Greenhouse Gases Emissions and Sinks Inventory (CO₂, N₂O, CH₄, CO, NO_x, NMVOC).
 - Climate change mitigation assessment.
 - Vulnerability and adaptation assessment.

Strengthening the capacity of DNA and CDM:

- SD criteria and CDM approval procedures approved.

- CDM project approval process communicated to CDM potential project developers.
- National forestry definition put in place and communicated to UNFCCC.

Ozone layer protection:

- Report of ODS consumption in previous year (2009) submitted to UNEP.
- Rwanda has already submitted the HCFC management plan to UNEP.
- There is no more importation of CFCs and the equipment containing them.
- Six processing industries have converted their cooling systems to non-ozone depleting systems; Conversion going on for two more industries.

Pollution management:

- In collaboration with the Rwanda Bureau of Standards, air quality and effluent discharge environmental standards have been developed and published.
- Technical assistance to various institutions, individuals and companies for best environmental management practices was provided.
- Guidelines for wastes disposal to be finalized in the course of the next year.
- Environmental inspections to prevent, control or stop environmental degrading activities have been conducted.
- 11 practical tools (practical guidelines) for environmental management in various sectors have been developed .
- Activities to control the use, manufacturing and importation of polythene bags have been conducted within the country and at all borders.

The outreach strategy for SOE report available including:

- SOE dissemination in parliament done.
- Episodes for TVR and Radio done.
- The summary of SOE for decision makers translated in French.
- The key messages of the SOE translated in Kinyarwanda.
- Studies to undertake biogas and kraal construction are under way.
- Process to hire a consultant for a biogas project is underway.
- Report on best practice available in discussion with key stakeholders.

1610 persons at District and Sector levels in Eastern and Northern Provinces have been trained. The remaining Western and Kigali City will be trained next FY.

Policy Implementation Constraints as Identified by the ENR Joint Sector Review 2010:

- Challenge to find appropriate equipment for the promotion of environmental clubs in especially for schools.
- Difficulties in finding data, delays resulting from the use of outsourced software and outsourced international expertise on Climate Change.
- Lack of infrastructure (landfills, sewage systems etc.) for waste management.

- Wetland encroachment.
- Weak commitment of decentralized enforcement of wetland buffer.
- Unsustainable use of fertilizers and pesticides hence causing pollution.
- The split of the Ministry (MINERENA) in Nov 2009 into two ministries (MINIFOM & MINERENA) affecting budget allocations although programmes and sub programmes remained the same.

The following limitations as well as potential entry points for the promotion and mainstreaming of RECP in ENR are identified here below:

Limitations:

- No explicit reference to the promotion of cleaner production or efficient resource utilization in the strategic actions for Industry.
- Key performance indicators for the ENR-SWG are not match with achievements as reported in the monitoring and evaluation Joint Sector review mechanism of the EDPRS.

Possible entry points:

- Integrate environmental dimension in economic planning by taking the impact and the cost of environment in socio-economic planning into consideration.
- Integrate environmental aspects in commercial and industrial activities and promote environmentally friendly tourism.
- Promote environmental education, information and sensitization actions including incorporation of environment in primary , secondary and tertiary education.

2.3.3 Rwanda Water Policy, Legislation and Strategy

2.3.3.1 Rwanda Water Law

Law N°62/2008 of 10/09/2008 putting in place the use, conservation, protection and management of water resources regulations stipulates in Article 3 the general principle, that Water is a good belonging to the State public domain. Its use constitutes a recognized right in force to all in the scope of laws and regulation in use. Article 4 stipulates that protecting and using water resources, protecting and appropriately using water resources, in the natural balance respect, are of general interest and constitute an imperative duty for all, notably the State, the local communities, private sector, civil society and citizens.

The water law also makes provisions that are relevant to the promotion and implementation of RECP in Rwanda featured in Annex 8, of which the following are identified as a possible basis for identifying entry points for RECP promotion and mainstreaming:

Article 5: Water resources management

3° the principles "user-payer and polluter-payer" according to which the user of water and the polluter support a significant part of expenses resulting from measures of prevention, of pollution reduction and restoration of the resource in quality and in quantity;

4° the principle of users' association for the administrative management of water;

5° the principle that users of the public distribution services of drinking water and sanitation should play a major role in these services provided to them, according to the contributory capacity of users.

Article 45: Bonus

A reduction of royalties or a "bonus" can be agreed to all persons titular of an authorization or a concession who deploy, in agreement with the competent administration, devices permitting to decrease the quantity of water used and to reduce the quantity of pollution. The existing installations have a five (5) years delay, from the publication of the present Law into the Official Gazette of the Republic of Rwanda to be in conformity with it.

Article 76: Pricing

Modes of the cost recovery of water public service shall respect the following principles:

1° the access to water public service, be it at the boundary-marks' fountains or the individual connection, must always be payable.

2° full cost recovery of investment, renewal and exploitation are considered in fixing prices.

3° competent authorities fix prices and make them public.

4° underprivileged groups are considered in fixing prices.

5° tariffs are reviewed periodically taking in account the evolution of investment and exploitation conditions in accordance with the criteria defined by the relevant authority.

2.3.3.2 National Policy for Water Supply and Sanitation

In Rwanda, the National Water Resources Management policy originates in the Ministry with water resources management in its responsibility and is part of the ENR sector as discussed earlier in this document, whereas the National Policy for Water Supply and Sanitation Services (WATSAN) policy of 2010 originates in the Ministry of Infrastructure (MININFRA).

The WATSAN policy document describes the institutional sector framework and responsibilities for water supply and sanitation as still evolving. The sector is characterized by significant structural changes and reforms, either accomplished in recent years or still ongoing. Among the most important recent changes are the separation of water supply and sanitation services from water resources management in 2008; the transfer of the responsibility for water supply and sanitation services delivery and implementation to the districts; the concentration of rural water and sanitation project implementation capacities in a national Programme Coordination Unit; the systematic introduction of delegated management; the increasing involvement of the Rwanda Utilities Regulatory Agency (RURA) in the water supply and sanitation sector; and the on-going transformation of ELECTROGAZ into a new Utility that will be separate from energy services but will also be in charge of urban sewerage.

The overall objective of WATSAN policy is to ensure sustainable and affordable access to safe water supply, sanitation and waste management services for all Rwandans, as a contribution to poverty reduction, public health, economic development and environmental protection.

Specific objectives:

- Raise rural water supply coverage to 85% by 2012 and to 100% by 2020 by assisting the Districts to plan, design, finance and implement infrastructure projects.
- Ensure sustainable functionality of rural water supply infrastructure by developing effective management structures and well-regulated public-private partnership (PPP) arrangements.
- Ensure safe, reliable and affordable urban water supply services for all (100% service coverage by 2012) while strengthening the financial viability of the Utility.
- Raise household sanitation coverage to 65% by 2012 and 100% by 2020, and promote hygiene behaviour change.
- Implement improved sanitation for schools, health facilities and other public institutions and locations.
- Develop safe, well-regulated and affordable off-site sanitation services (sewerage and sludge collection, treatment and reuse/disposal) for densely populated areas.
- Enhance storm water management to mitigate impacts on properties, infrastructure, human health and the environment.
- Implement integrated solid waste management in ways that are protective to human health and the environment.
- Develop the sector's institutional and capacity building framework.

Policy achievements recorded in the Watsan policy document:

- Access to improved sources of drinking water has reached about 74% (rural: 71%, urban: 88%) in 2008 according to the national inventory.
- Sanitation coverage was estimated at 45% (rural: 44%, urban: 54%) in 2008.
- Total latrine (or toilet) coverage in Rwanda is 96% in 2008.

2.3.3.3 WATSAN Strategic Action Plan 2009 - 2015

The WATSAN policy document includes a Strategic Action Plan meant to provide guidance for the achievement of both the EDPRS and Millennium Development Goals. Its time horizon has been set to 2015. The strategic plan takes into consideration the requirements for the period up to 2020 but without providing implementation details.

The following are RECP-Relevant performance indicators, targets as well as proposed implementation responsibility set in the strategic plan:

Promote innovative technologies/approaches and develop knowledge management (Implementation responsibility: MINEDUC, NUR, KIST, KHI):

- 25 Rwandan researchers and students involved in applied WSS research.
- Sector knowledge management system in place and used progressively by 2015.
- Rainwater harvesting as the main source of drinking water supply for areas that cannot be supplied by gravity.
- Solar pumping as an alternative to diesel pumping for areas not connected to the grid.
- Simplified collective sanitation systems.

- Affordable solutions for or integrated sanitation solutions for health institutions.

Improve operational efficiency and reduce unaccounted-for water:

- Reduce % technical losses to from 18% to 12 % by 2015 (Implementation responsibility: RWASCO, RURA).

Develop, pilot and demonstrate a range of individual sanitation technologies for different standings:

- Annual workshop on appropriate sanitation technologies and results disseminated by 2015 (Implementation responsibility: MININFRA, MINISANTE, Districts).
- Number of private or public sanitation "District Sanitation Centre" built in Districts (for demonstration, exposition, training, point of sale) by 2014 (Implementation responsibility: MININFRA, Districts, PSF).

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Establish an effective regulatory and institutional framework for collective sewerage and sludge management:

- Legislation for sanitation, hygiene and environmental health updated by 2012 (Implementation responsibility: MINISANTE, MINIRENA).
- Regulatory framework, norms and standards guide for effluents and minimum standards for sanitary facilities defined and disseminated by 2012 (Implementation responsibility: MINISANTE, MINIRENA, RURA, REMA, RBS, RWASCO).

Develop an integrated approach for solid waste management in Rwanda (Implementation responsibility: MINALOC, MINEDUC, MINICOM, REMA, RURA, Districts, Kigali City):

- National Solid Waste Task Force operational (2011).
- Integrated solid waste management concept and master plan for Kigali established (2011).
- Emergency and transitional measures ready for implementation (2011).
- Number of Sanitation Master plans for urban areas with solid waste considerations integrated (progressive 2011-2015).

Implement minimization of waste as a national priority (Implementation responsibility: MINICOM, RBS):

- Tools developed and awareness campaigns on solid waste reduction executed (progressive 2011-2015).

Recover value from waste and promote safe collection and reuse/recycling systems involving the private sector (Implementation responsibility: MINISANTE, MINICOM, Districts, Kigali City):

- % of non-organic domestic waste collected in urban areas (progressive to 2013).
- % of non-organic domestic waste reused or recycled in urban areas (e.g. paper, glass, plastic, metal) (progressive to 2015).

Ensure safe disposal of residual waste and improve existing dumpsites (Implementation responsibility: MINISANTE, REMA, Districts, Kigali City):

- Number of controlled landfills constructed in urban area by district as per minimum standard (progressive to 2015).
- % of non-organic industrial waste collected and disposed in urban areas (progressive to 2015).

Limitations:

- No specific provision on development and implementation of demand-side management programmes.
- No dedicated water and sanitation services authority resulting in delegation of the policy implementation to various agencies.

Potential entry points:

- Favourable water resources management principles based on precaution, prevention, 'user-payer and polluter-payer' and charges as per 'contributory capacity of users' principle.
- Incentive through reduction of royalties to all persons/entities who use less volume of water or reduce pollution.

2.3.4 National Energy Policy & Strategy

The competency for the Energy Subsector belongs with the Ministry of Infrastructure (MININFRA). The national energy policy sets the context in the energy supply and demand situation in 2008, highlighting an approximate 86% of primary energy use from biomass, in the form of wood that is used directly as a fuel (57%) or is converted into charcoal (23%), together with smaller amounts of crop residues and peat (6%). The policy document goes on to state that of the 14% of non-biomass primary energy, petroleum products account for 11% (used mainly in the transport sector) and electricity for approximately 3%.

A summary of RECP-relevant policy objectives of the National Energy Sector Strategic Plan is provided in Annex 9 with the following identified as a basis for potential entry points for the promotion and mainstreaming RECP:

Biomass sub-sector:

- Promotion of other energy sources for cooking and heating such as biomass briquettes (peat, papyrus, waste), kerosene (using efficient and safe pressure stoves and lights), LPG, solar water heating and electricity (for users in the high end market).

Electricity sub-sector:

- Reduction in the cost of electricity.
- Diversification in sources of electricity supply.

New and renewable energy subsector:

- Provide economically justified feed-in tariffs (based on avoided costs of production to the utility but recognizing the potential availability of international credits for greenhouse gas reductions) or other mechanisms to give incentives and reduce risks for electricity production from renewable sources.
- Establish norms, codes of practice, guidelines and standards for new and renewable energy technologies.

Agriculture:

- Facilitate agro-processing centres with appropriate energy alternatives, with emphasis

on electrification in order to promote small-scale industry, employment creation and economic growth.

- Encourage energy efficiency in ploughing and transportation, where these activities are mechanized, and in irrigation, coffee washing stations, agro-processing and other agricultural activities.
- Create an enabling environment for governmental institutions and private sector engaged in research and development into appropriate energy technologies for agriculture and options for energy products to be produced by the agricultural sector.

Industry and Services:

- Promote improved energy management practices, including the use of Energy Audits and follow-on energy efficiency and conservation measures.
- Create awareness of the importance of using cleaner energy sources where possible, with environmental performance being included in energy audits and energy management strategies.
- Encourage efficient use of alternative energy sources, particularly environmentally preferable ones.
- Improve coordination of institutions concerned with energy, industry and environmental issues.

Transport:

- Promote energy conservation and efficiency through encouraging proper maintenance of vehicles and good driving practices.
- Encourage the development of affordable and well run mass transport systems so that the proliferation of individual goods and passenger vehicles is reduced.
- Reduce pollution by encouraging the use of environmentally friendly fossil fuels such as unleaded petrol and low sulphur diesel.
- Encourage research into alternative fuels for transport purposes, such as ethanol, methanol and biodiesel.

Gender Cross-cutting:

- The diversification of energy sources for cooking and lighting in the home has a high priority.
- In developing alternatives for domestic energy, attention is to be paid to health and safety as well as efficiency, cost and convenience.
- Women are to be sensitized on energy issues as well as being given opportunities to try out new technological options before they are disseminated more widely.

Environment Cross-cutting:

- Wherever possible, development of environmentally sound energy is to be supported through accessing internationally marketable carbon credits through the Clean Development Mechanism (CDM) or through the voluntary carbon emissions market.
- Through the Capacity Building and Transactions Support project, Government is committed to developing the capability to evaluate proposals for carbon credit projects and ensure

that Rwanda maximizes the benefits that can be derived from the CDM programme and the voluntary carbon market.

RECP-Relevant Achievements Toward Energy Policy Objectives from the 2009-2010 Joint Sector Review:

Increased Access to Electricity for Enterprises and Households:

- Connected households and enterprises increased to 159 516, beyond 2009-2010 target.
- Electricity generation increased from 67 MW in 2008 to 84 MW in 2010.

Energy diversification:

- 828 domestic biogas plants built.
- 3 Institutional biogas plants built; 6 under construction.
- Detailed geophysical and geochemical studies completed for Rwanda geothermal assessment.

Control of service costs and decrease in electricity tariffs:

- Tariff study completed and submitted by Oct 2010.
- 91% of customers on pre-paid metres to reduce commercial losses.
- 10 MW saved through energy efficient devices.

Limitations:

Mainly focused on increased generation, access and use of energy with limited emphasis on demand-side interventions.

Potential entry points for RECP:

- Expansion of the energy-mix through the development of new and renewable energy sources.
- Promotion of efficient energy use and management practices including efficient use of alternative energies in industries and services.
- Use of the Clean Development Mechanism to facilitate the development of environmentally sound energy and reduction of emission.

2.3.5 Existing National Policy and Strategic Plan for Industry

2.3.5.1 National Industrial Sector Promotion Policy of 2006

The National Industrial Sector Promotion Policy of 2006 for Rwanda states the following as its principles:

- The private sector is the engine of a sustainable development. Therefore, it would be necessary to organize a progressive disengagement of the Government from the productive sector and to favour the blooming of a strong business class and entrepreneurs.

- Rwanda is provided with very few mining resources. This opposes to the heavy industry and instead favours the small industry. On the other hand, the country has an important and cheap labour force and could emphasize the labour using production. However, this manpower should be better trained, especially in using the new technologies.
- To be viable, industrial production should be organized in such a way as to protect the existing natural resources. To contribute to a sustainable poverty reduction, the industrial sector should integrate the processing of the agricultural and farming products and should concentrate on increasing quantities and the value added.
- To contribute to the creation of a sound macroeconomic environment in order to lower the level of brain drain, to financially support the educational system, to promote applied research and the transfer of adapted technology by encouraging the cooperation between learning and research institutions with the industrial sector.
- The decentralization of the industrial activities will limit movements to Kigali City, and will increase the wealth in the rural environment with a particular emphasis to increasing production the capacity of rural women who constitute 52.3% (in 2006) of the Rwandan population.
- Promotion of competitiveness in the industrial sector towards growth in productivity.
- Promotion of Micro, small, and medium enterprises.

The industrial policy aims at generating more value addition, creating more wealth and employment, improving the household living standard and contributing to the improvement of the external balance of payments of the country.

The policy document sets the following specific objectives:

- Increasing local resource transformation into more value added products.
- Promotion of increased production, and competitiveness of industries at the local level and access to foreign markets.
- Protection of the environment using appropriate technologies.

2.3.5.2 Ministry of Trade and Industry Strategic Plan 2009-2012

The Ministry of Trade and Industry (MINICOM) as the originator and implementer of the national industrial policy, the Ministry's mission is to lead the development of external and internal trade, competitive companies, businesses and cooperatives and the promotion of investment and consumer rights.

In its Sector Strategic Plan of for 2009-2012, MINICOM sets the following strategic objectives:

- i) Increase the value of existing exports
- ii) Diversify into new exports and develop Rwanda as a regional hub
- iii) Facilitate traders through integration and by promoting standards
- iv) Increase the level and quality of investment in productive sectors
- v) Create an environment conducive to private sector development

The Strategic Plan initiatives relevant to RECP are summarized here below:

Increase the value of existing exports:

- Identification of bottlenecks in the value chains for export industries, including technologies in use in coffee washing and tea factories.
- Use of co-operatives for coffee and tea producers to provide support for inputs such as fertilizers and pesticides.
- Hides and skins partnering with the private sector to produce slaughterhouses and collection centres for improved efficiency of the industry.
- Offer extension services and training to handcraft service centres to improve the handcraft industry.

Diversify into new exports and develop Rwanda as a regional hub:

- Evaluate infrastructure needs of new industries, and how they can be combined with existing policy on infrastructure.
- Develop a policy on the Kigali Free Trade Zone.
- Promoting a Rwandan packaging industry.
- Determine the effect of national and international standards provision on Rwandan firms, particularly on exporters including the costs of gaining certification.
- Ensure that RBS has sufficient access to technical equipment for testing compliance with standards.
- One stop shop for exporting including Sanitary and Phytosanitary testing, certificates of origin and other export standards support.

Increase the level and quality of investment in productive sectors:

- The degree of technological upgrading by Rwandan manufacturing firms.
- Develop turnaround plans for factories which are struggling but are strategic and have real potential to be profitable and competitive.
- Identify and attract strategic investors for technology transfer in packaging.
- On the job technical and management training in strategic sectors - conduct technical and management trainings of at least 100 persons.
- Revise the existing draft SME policy/strategy for a large expansion of SMEs.
- Develop supply chain system for internal trade (for cassava and banana) for improved efficiency.
- Establish industrial parks in each district of Rwanda beginning with five pilot parks.
- Ensure that training is provided to co-operative leaders, managers and members, working with RCA to develop the specialized training centres.

RECP-Relevant progress as reported in the MINICOM Joint Sector Review:

- Progress reported relates to the completion of a feasibility study for the establishment of the Kigali Free Traded and Export Promotion Zone.

Limitation:

- The proposed one-stop shop service to industries does not explicitly include environmental aspects.

Potential entry points:

- Evaluate infrastructure needs of new industries and how they can be combined with existing policy on infrastructure.
- Determine the effect of national and international standards provision on Rwandan firms particularly on exporters including cost of certifications.
- Revise the existing SME policy/strategy for a large expansion of SMEs and establish industrial parks beginning with five pilot parks.

2.3.5.3 Small and Medium Enterprises (SMEs) Development Policy 2010

The Government of Rwanda (GoR) in its SME Development Policy of 2010, recognizes that SMEs will play a critical role in realizing its vision to become a middle-income country by achieving the EDPRS goal of attaining an annual GDP growth rate of 8.1% and an increase of off-farm employment to 30% by 2012.

The policy document mentions that over 80% of Rwandans are engaged in agricultural production. The SME sector, including formal and informal businesses, comprises 98% of the businesses in Rwanda and 41% of all private sector employment, though the formalized sector has much growth potential with only 300,000 currently employed. Most micro and small enterprises employ up to four people, showing that growth in the sector would create significant employment opportunities in non-agricultural related industrial sector.

The SME sector also has the potential to lower Rwanda's trade imbalance. Rwanda's trade deficit has grown from \$229m to an estimated \$770m over the past five years (2005 to 2009). The GoR's vision is to increase the role of value-added exports to increase export revenue and reduce the import-export gap. Making existing and new Rwandan SMEs more competitive in value added exports is therefore among other vital actions necessary to reverse the trade imbalance and build competitiveness.

The SME Development Policy lays out the following objectives:

- Promote a culture of entrepreneurship among Rwandans.
- Facilitate SME access to development services including.
 - a) Business development services.
 - b) Access to local, regional and international markets and market information.
 - c) Promote innovation and technological capacity of SMEs for competitiveness.
- Put in place mechanisms for SMEs to access appropriate business financing.
- Simplify the fiscal and regulatory framework for SME growth.
- Develop an appropriate institutional framework for SME development.

RECP-relevant implementation strategies the SME Development Policy contains are outlined in outlined below:

Facilitate SME access to development services including

- Establish operational BDS centres in targeted high-impact areas with at least two staff members, in collaboration with other key stakeholders who want to offer their services that include:
 - Access to finance training.
 - Market information.
 - Access to IT.
 - Business advisory clinics.
 - Training on bookkeeping.
 - Advice for completing tax return.
 - Database of approved consultants.
 - Tax advisory services.
 - eGovernment portal for government services to the citizenry.
- Using a PPP approach, establish 12 Centres of Excellence offering full scale BDS services and SME business incubators, specifically targeted at the development of key value-added clusters.
- Each BDS center, through the collaboration of staff and advisors, will identify at least three priority clusters in their area to target for full value-chain development.
- Train a critical mass of private Business Advisors in every sector, drawing from existing training institutions (NGOs and private sector) as well as independent consultants, in offering specific components of BDS services such as access to finance, market information, bookkeeping etc.
- Certification by the RDB: Upon completion of training, advisors would be awarded a certificate in the specified component and referred to a BDS centre from which they operate; this will improve out-reach of BDS services on a sustainable basis. The business advisors could be rewarded through small allowances (from the BDS budget) for mentoring successful businesses on top of fee based services such as accounting and tax advisory services.
- Design and implement a training program for BDS centre staff and consultants to identify the challenges faced by struggling businesses to determine whether they are viable and what inputs are necessary to support those that are not viable.

Promote innovation and technological capacity of SMEs for competitiveness

- Promote creativity and innovation in the SME sector through the establishment of annual award schemes that recognize innovation and technology development.
- Through Business Development Centre (BDS), facilitate links between research institutions and SMEs to commercialize research products, focusing on targeted clusters along the value chain, including agricultural research for agro-business, product development and eco-technology in tourism etc.
- Using mobile ICT vans, increase the adoption of appropriate and useful ICT into SME business practices.

- Introduce regular IT training for SMEs and make available subsidized business software loaded laptops for attendees.
- In collaboration with private sector real estate developers, establish regional industrial parks in four provinces to provide necessary basic infrastructure for SMEs clustered in manufacturing and services.
- Introduce appropriate technology demonstration centres, in partnership with SMEs, within the industrial parks for practical training and acquisition of technologies for value-addition.
- Provide access for SMEs to the Special Economic Zones (SEZ) for facilitating technology transfer and technology diffusion among the operating firms the assumption being having access to adequate infrastructural facilities and working alongside other large and small enterprises will promote technological adoption.

Limitations:

- No reference to the importance of promoting environmentally friendly or resource efficient production for sustainable business.

Potential entry points of RECP:

- Establish Centres of Excellence in each district offering full-scale Business Development Services (BDS) and SME Business incubators.
- Promote creativity and innovation in the SME sector through schemes that recognize innovation and technology development.
- Introduce appropriate technology demonstration centres within industrial parks for practical training and acquisition of technologies.

3. MAINSTREAMING MEASURES

3.1 Mainstreaming RECP

Mainstreaming, in the context of this report, is an institutional process that facilitates a systematic integration of sustainability principles in existing policy frameworks and institutional practices. Mainstreaming is not about creating another layer of policy or institutional process. It is more about transforming existing policy and institutional processes and practices in such a way that it fosters and promotes sustainability at all levels. Mainstreaming an issue into national development planning thus refers to incorporating that issue into all elements of a country’s plans, policies, programmes, strategies and budgets and their implementation.

Mainstreaming contributes to ensuring policy sustainability as it lessens the risk of a measure being viewed as a one-off project or Programme and makes it a priority when decisions on budget allocations are taken. Furthermore, many developing countries receive direct budget support from donors. If a given issue is part of the overall development effort in a country, the chance of securing funds for implementation will increase. Mainstreaming is a multi-year effort that must be carried out at multiple scales including national, sub-national and local levels.

The Programmatic approach of mainstreaming environmental sustainability and RECP in national policy and strategy frameworks is consisted of the following three components which need to be implemented in an integrated way (as shown in Figure 2).

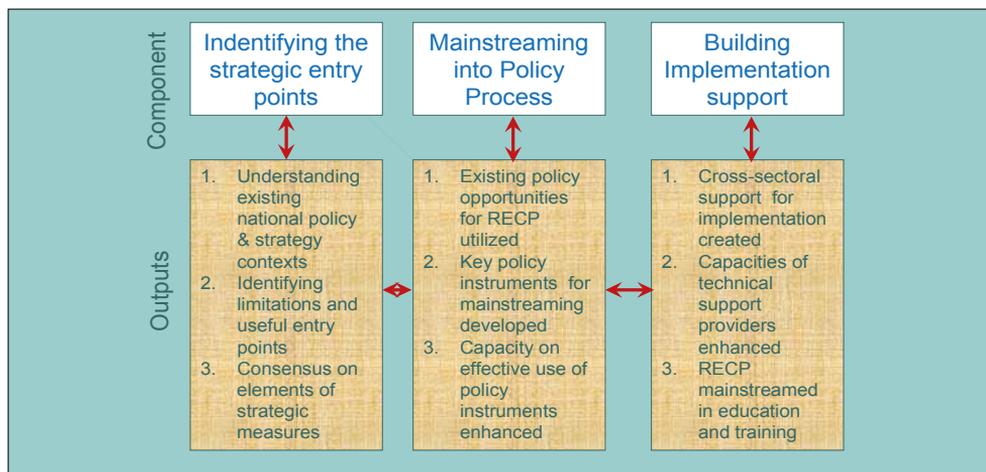


Figure 2: Programmatic approach for mainstreaming (UNEP, 2009)

- A) *Identifying the strategic entry points*: this involves a detailed review of existing national policy and strategy contexts with a purpose of identifying limitations and useful entry points that provide the basis for identifying elements of the strategic measures through a consultative process.
- B) *Mainstreaming into Policy Process*: this covers the actions that are to be taken by the government and other stakeholders using existing policy opportunities and the development of key policy instruments together with the requisite capacity for their effective implementation.

- C) *Building implementation support*: this refers to the creation of the necessary institutional support and capacity that supports cross-sectoral coordination and effective implementation on a long-term basis.

The main benefits of mainstreaming environmental sustainability in national policy and strategy frameworks are:

- Better understanding of the critical development-environment linkages resulting in better management of the synergies.
- Enhanced policy effectiveness at the national level and across sectors, and improved cumulative development gains for society.
- Improved sustainability of the development process by reducing or managing the adverse environmental impact of the development process.

This policy review and assessment is aimed at covering the first component of the programmatic approach (illustrated in Figure 1) on identifying the strategic entry points for mainstreaming. The suggested elements of mainstreaming strategy are presented under the following four components of intervention.

- Institutional and policy integration.
- Economic and fiscal incentives.
- Capacity building and support to SME.
- Information and public education.

3.2 Institutional and Policy Integration:

- Facilitate the implementation of the Economic Development and Poverty Reduction Strategy (EDPRS) on a resource efficient basis by mainstreaming RECP in the development of the relevant Sectoral Strategic Plans that are executed through Sector-Wide Approaches (SWAPs) facilitated by the Sectoral Working Groups (SWGs).
- Promote awareness among enterprises that putting a RECP programme in place enables them to comply with standing environmental regulations for rehabilitation or expansion requirements and to pass audit test for their respective environmental management plans.
- Ensure that adequate and explicit consideration is given to resource efficient and cleaner production methods and technologies in Environmental Impact Assessments of new projects in the planning and development of new industrial parks.
- Make the transition from the current ad-hoc way to a more institutionalized way of promoting RECP in Rwanda by:
 - Establishing a National Steering Committee that is chaired by MINICOM and vice-chaired by MINERENA and that has representatives of REMA, RBD and other relevant organizations and private sector representatives to provide guidance.
 - Formalize the institutionalization of the Rwanda Resource Efficient and Cleaner Production Centre (RRECPC) under the MINICOM Industrial Development Programme. The RRECPC may deploy a representative in the One-Stop-Centre with RDP to sensitize new businesses with RECP as a means of complying with environmental management requirements and for reducing production costs. The

Industrial Development Programme is currently implementing the projects for the “Gikondo relocation” to a new industrial zone and establishing Regional Industrial Parks, aspects that were identified as potential entry points for mainstreaming RECP.

- Based on this report, prepare a cabinet paper on ‘Promoting Resource Efficient and Cleaner Production in Rwanda’ as a paper that would be submitted to the cabinet by MINICOM.

3.3 Economic and Fiscal Incentives

- Introduce economic instruments including environmental charges, fees for non-compliance and liability payments targeting the major environmental problems related to air pollution, water quality and land management and provide incentives to those which are reducing their pollution and environmental pressure through efficient utilization of resources. These instruments could be managed through the soon to be legislated National Environmental Fund (FONERWA - French abbreviation).
- Apply appropriate tax measures on pollution-inducing goods and services (such as taxes/charges on batteries and accumulators, electronic waste and other environmentally harmful products) and provide tax-exemptions and/or rebates on technological goods (such as renewable and clean technologies) that facilitate the transition towards a more resource efficient society.
- Get rid of subsidies that encourage inefficient resource utilization (including across-the-board subsidies on basic resources use such as water and energy) and extend the energy subsidy beyond access facilitation so that it could cover efficient energy utilization mechanisms.
- Provide special considerations for green economy sectors, including renewable resource-based production such as organic farming and provision of environmental management services, with a purpose of creating green jobs and contributing to the low carbon and resource efficient economy.
- In the long-term, consider gradual shifting of taxes from labour to energy and resources consumption thereby encouraging job creation while at the same time promoting more efficient resource use. This requires undertaking a comprehensive and systematic assessment of economic and environmental fiscal reform (EFR) as part of the transition towards Green Economy. Rwanda has recently completed an EFR.

3.4 Capacity Building and Support to SMEs

- Develop a national technical support programme on RECP that will provide technical back-up support to SMEs in the development and implementation a Resource Efficiency Improvement Programme and fulfil the proposed requirement for renewing their environmental permit for operation.
- Enhance the capacities of technical service institutions and programmes, including an institutionally regularized national RECP centre, energy and water and sanitation service companies, the Private Sector Federation, the planned Business Development Centres (BDCs) and Demonstration Centres and other industry support centres, in providing technical information and support to SMEs on the application of clean technologies and the development and implementation of resource efficient industrial improvement programmes.

3.5 Information and Public Education

- Include the provision of financial support to projects that are aimed at improving the resource efficiency of an SME as one of the project portfolios to benefit from the support that is to be provided through the soon to be legislated National Environmental Fund (FONERWA - French abbreviation) which could be augmented through environmental tax and charges to be collected from polluting industries.
- Provide policy and institutional support for the formal development and operation of waste recycling groups with a particular focus on enhancing their economic and social contributions through waste-to-resource conversion and job-creation.
- Train the REMA interns that are deployed in sectoral ministries the support from the 'Poverty and Environment Initiative so that they could facilitate the mainstreaming of Resource Efficiency in the respective sectoral programmes.

- Support the creation of national information systems on RECP that would improve the availability of data and information on RECP related issues, including information on clean technology options and financing opportunities, and link such a system with the country's investment licensing process so that new investment decisions could benefit from making environmentally sound decisions in their technology selections.
- Introduce an environmental reporting requirement and funding mechanism for industries and businesses covering basic data on the volume of resources consumed and waste generated and discharged including air emissions.
- Ensure that the public sector (e.g. Government agencies) is leading by example in promoting Resource Efficient and Cleaner Production by adopting and implementing the principles of sustainable public procurement in its public sector procurement procedures.
- Require utility companies covering key resources such as energy and water to develop and implement demand-side management programmes that are aimed at promoting efficient resource utilization and reduction of waste by the general public resulting in companies meeting higher demand without having to produce more. Such programmes could consist of the organization of public campaign weeks on energy and water use, efficiency awards to industries and community groups and media campaigns.
- Promote the integration of subjects related to Resource Efficient and Cleaner Production in the curriculum of universities and the relevant Technical and Vocational Education and Training programmes and support continuous RECP education programmes targeting key economic sectors and community groups. This could initially focus on engineering and business faculties in view of the significance it would have in industries' planning and decision making processes. Promote informal public education programmes for promoting RECP through appropriate media.

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ANNEXES

Annex 1: RECP-Relevant SOE 2009 Recommendations

Environment and economic development

- Institutionalize the integration of environment into policies, plans and programmes as provided for in the Environment Management Policy.
- Provide well-packaged education and informative material on why environment matters and what actions the various stakeholders at the district and lower levels could take to promote environmental sustainability.
- Invest in strengthening the government's capacity to assess the costs of environmental degradation (preferably via satellite account, for example tourism) and how the various taxes and subsidies affect the achievement of environmental sustainability, with the view to developing suitable economic instruments.

Climate change and natural disasters

- Document the nature and impacts of climate change, especially in the sensitive sectors of agriculture, infrastructure, water and health.
- Understand, document and strengthen existing livelihood coping strategies (e.g. how households cope with unexpected circumstances brought about by extreme weather on food crops, water and energy requirements) rather than imposing new, high-tech solutions.
- Coordinate efforts within and between governments, private sector and civil society in promoting adaptation to climate change and sustainable development through sharing ideas. This will encourage innovation and maximize the efficiency with which limited resources are used.
- Integrate climate change adaptation into the development agenda across all sectors at all levels of government.
- Strengthen national capacity for effective engagement in the regional and global negotiations, and for collective actions to mitigate and adapt to climate change.

Forests and protected areas

- Strengthen the human resource capacity of the forest sector to ensure effective provision of technical and extension services.
- Intensify water quality monitoring and where practical, train and engage the environment committees at the district level to support this effort.
- The ministries responsible for agriculture, environment and industry should harmonize and rationalize their policies, mandates and functions in order not to compromise adequate availability of wetland ecosystem services and products.

Energy resources

- Expediently develop the Lake Kivu methane projects for natural gas extraction for electricity generation and domestic cooking requirements and bring on-line additional hydro-power stations.
- Foster collaboration between the ministries responsible for agriculture, environment and energy to ensure that the development of wetlands does not interrupt the availability of water from the wetlands that feed hydropower stations.
- Implement a wood and charcoal efficiency and a substitution strategy that can help curb deforestation.
- Make rural energy and electrification an integral part of the country's rural transformation and poverty reduction strategy with the view to achieving the Vision 2020 targets on the percentage of the population with access to electricity.
- Enforce the Strategic Environmental Assessment (SEA) and Environment Impact Assessment (EIA) requirements in the development of new energy supply systems.

Industry and mining

- REMA should effect the provision of the Mine and Geology Policy on its statutory obligation to study the impacts of mining and quarries on the environment with the view to ensuring that the existing laws and regulations on mining are complied with.
- The Cleaner Production programme should be expanded in order to ensure that expanded industrial production brings benefits to industry, the economy and the environment.
- In deepening decentralization, REMA should work closely with the ministries responsible for industry, mining, environment and local government to develop the capacity of district environment committees to enable them to contribute to the monitoring and enforcement of the laws and regulations governing industrial and mining operations.

Population, health and human settlement

- Make sufficient investment in the IMidugudu area in order to improve on human settlement, taking advantage of it to promote the uptake of energy-saving cook stoves, the replanting of degraded hill tops in the neighbourhood and better provision of education, water, sanitation and health services.
- Seek to build and strengthen synergy between the programmes of the Ministry of Natural Resources on water and sanitation and those of the National Water and Sanitation Authority for purposes of enabling the country to meet its EDPRS and MDG targets on water and sanitation.

Environmental policies, legislation and institutional arrangements

- Increase the knowledge and awareness of the general public on environment laws and policies in order to facilitate public participation in the EIA public hearings in particular, and in public decision making, in general.
- Fill the critical gaps in environmental policies and laws, ensuring that the inter-linkages approach is adhered to in the development of new policies and laws.

ANNEX 2: Institutions Promoting & Practicing RECP

REMA:

- Continued support towards RECP industrial implementation.
- Cleaner production as a component of the second phase of the Lake Victoria Environmental Management Project (LVEMP II) Project.
- Implementation of the Cleaner Development Mechanism (CDM) in Rwanda including the establishment of the National Designated Authority for carbon trading.
- Establishment of EIA regulation and laws.
- Delegating EIA regulation and Cleaner Production Awareness to the one-stop-centre of the Rwanda Development Board (RDB).

MINICOM:

- Implementation of the Rwanda RECP programme.
- Preparation of the Rwanda Industrial Master Plan (not yet published).

MININFRA:

- Promotion of energy saving fluorescent lighting tubes in Rwanda.
- Promotion of energy saving cooking stoves for rural areas in Rwanda.
- Mini-hydropower plants installed in different areas.
- Promotion of solar energy for supplement and replace grid electricity.

ACADEMIA and RESEARCH INSTITUTIONS:

- The National University of Rwanda established the Centre Environment, Entrepreneurship and Sustainable Development in which RECP is a priority.
- The Kigali Institute of Science and Technology (KIST) instituted courses in Civil Engineering and Environmental Technology and Environmental chemistry and conducts research on environmental technology and renewable energy (focus on biogas generation) as well as on water and air pollution.
- Kigali Health Institute (KHI) has a department of environmental health.
- IRST specializes in several research areas including energy (peat, solar, hydroelectric micro/central), soil conservation, environment protection and land rehabilitation, sustainable exploitation of natural resources, integrated natural resources management, Rwandan flora, phytomedicines, biotechnology, essential oil, Rwandan biodiversity protection and conservation, post genocide Rwandan economy and other social issues, literature and linguistics.

ANNEX 3: EDPRS 2008-2012 Policy Performance Matrix

Table 7.3 EDPRS Summary Policy Matrix

Sector	2008	2009	2010	2011	2012
Agriculture	<ul style="list-style-type: none"> Implement national agriculture input strategies and develop food security strategy Develop policy on genetic improvement of livestock, animal nutrition and animal disease control 	<ul style="list-style-type: none"> Implement national agricultural input strategies and food security strategy Implement genetic improvement of livestock and animal nutrition and disease control strategies 	<ul style="list-style-type: none"> Implement national agricultural input strategies and food security strategy Implement genetic improvement of livestock and animal nutrition and disease control strategies 	Conduct review and evaluation of fertiliser strategy implementation	Evaluation of the various strategies
Infrastructure: Transport	<ul style="list-style-type: none"> Adoption of a road maintenance strategy Establishment of Rwanda Transport Infrastructure Agency (ARIT) 	<ul style="list-style-type: none"> Adoption of a transport master plan for Rwanda. Establishment of Training Program for Masters Degrees for Transport specialists 	<ul style="list-style-type: none"> Transport safety policy adopted and implemented. 	Rail Development Strategy adopted	EDPRS transport policy implementation evaluated
Infrastructure: Energy	<ul style="list-style-type: none"> Energy Policy/ Strategy updated and adopted Electricity Master Plan finalised 	<ul style="list-style-type: none"> Draft policy note for reform of electricity taxes and subsidies Rules and Regulations for the Electricity and Gas sector adopted 	<ul style="list-style-type: none"> Privatisation of management of rural based power plants Comprehensive study on privatisation of RECO in place (unbundling process) 	Privatisation of Power Plants managed by National Power Utility (unbundling process)	<ul style="list-style-type: none"> Cross-Border Electricity Trade Agreements in place
Infrastructure: ICT	Develop a regulatory framework for ICT	Implement regulatory framework for ICT	NICI-II evaluated and NICI-III formulated	NICI-III adopted and start of implementation	NICI-III implementation continuing
Infrastructure: Habitat & urbanisation	National Policy on Urbanisation and master plan to support the implementation of imidugudu	Continuation of the Adoption of cities master plans and implementation of imidugudu.	Continuation of the Adoption of cities master plans and implementation of imidugudu.	Continuation of the Adoption of cities master plans and implementation of imidugudu.	Continuation of the Adoption of cities master plans and implementation of imidugudu.
Infrastructure: Meteorology	Adopt meteorological policy and strategic plan.	Implement meteorological policy and strategic plan		Establishment of an upper air observatory	Atlas for rainfall, temperature and humidity spatial and temporal distribution over Rwanda.
Land	Land use master plans developed and operational to guide land use management decisions at national level	Land use master plans developed and operational to guide land use management decisions at decentralised levels	Existing land rights secured through land tenure regularisation for effective land administration and land use management	Land administration simplified to protect land rights and facilitate investments in land	Institutional framework established and operationalised

Table 7.3 (continued)

Environment & Forestry	<ul style="list-style-type: none"> Begin distribution of environmental inspection checklists to cell level in all districts Adoption of National Forestry Plan and forestry legislation; operationalisation and capacity building of National Forestry Authority 	<ul style="list-style-type: none"> Database of all regulated substances updated annually and accessible to public Development and implementation of national programmes for reforestation, forestry management and wood utilisation 	<ul style="list-style-type: none"> At least 10 out of 16 environmental regulations and guidelines functioning at central and decentralised institutions to facilitate investments Development of strategy for private sector involvement and forest products improvement; development of forest resources diversification strategies 	<p>Five (Gishwati, Mukura, Rugezi, Kamiranzovu, Nyabarongo)</p> <ul style="list-style-type: none"> Akagera network including Gikondo) degraded ecosystems mapped, assessed and rehabilitated 	<ul style="list-style-type: none"> Increase number of projects compliant to national environmental standards to 95% approval rating for EIA certification Comprehensive impact evaluation of forest strategies and programmes
Education	<ul style="list-style-type: none"> Teacher Development and Management Policy finalised TVET policy finalised and published Updated science, technology and ICT in education policy in place - Adult literacy policy published 	Girls Education Strategic Plan published	<ul style="list-style-type: none"> Minimum Quality Standards framework in place Special Needs Education Strategic Plan finalised 	<ul style="list-style-type: none"> Guidelines for PTAs and School Boards issued SFAR means testing guidelines in place 	<ul style="list-style-type: none"> School Mapping linked to GIS and construction planning, Revise school construction guidelines
Health	<ul style="list-style-type: none"> Publish drug pricing policy Signing of Sector Wide Approach Memorandum of Understanding Publish health financing policy 	<ul style="list-style-type: none"> Creation of health financing data base Defining health personnel fixed positions for rural areas 	<ul style="list-style-type: none"> Preliminary report of Demographic and Health survey (DHS) Comprehensive evaluation of Health Sector performance 	<ul style="list-style-type: none"> Publish final report of DHS Comprehensive evaluation of Health Sector performance 	Comprehensive evaluation of Health Sector performance
Social Protection	<ul style="list-style-type: none"> Social Protection strategy approved National coordination body established and operational, Appropriate legal framework in place for Social Protection 	A comprehensive Social Protection programme in place	Preliminary report on Social Protection interventions	Publish a final report of Social Protection interventions and impacts	Social Protection Performance evaluation
Water and Sanitation	<ul style="list-style-type: none"> Results-based planning, monitoring and evaluation system operational Laws and norms regulating water resources management approved Integrated Water Resources Management and Development (IWRM&D) governance and investment plan in place 	<ul style="list-style-type: none"> National WATSAN master plan, developed, approved and operational Water master plans for all districts available Framework for M&E of implementation of Water Law, norms and strategies on water resources management available 	Strategy for effective decentralisation of water resources management towards Local Governments		Comprehensive evaluation of Water and Sanitation Sector performance

Table 7.3 (continued)

Capacity building	Public Service Management Policy, Skills Development Policy and Strategy, and Employment Creation Strategy operational	Labour Code adopted by Parliament, Health and Safety Policy and Strategy adopted by Cabinet	Remuneration policy elaborated		
Justice	<ul style="list-style-type: none"> Design and develop an MIS and M&E system for the sector Develop a SWAp for JLOS Create law reform commission Develop national legal aid framework and system 	<ul style="list-style-type: none"> Implement the MIS and M&E systems Functional SWAp for JLOS Prison inmates rehabilitation strategy in place 	<ul style="list-style-type: none"> Corruption assessment reports available Review functioning of legal aid 	Review of prison inmates rehabilitation strategy	Evaluation of JLOS performance
Private Sector	<ul style="list-style-type: none"> Reform fiscal and commercial laws Publish competition policy Develop and implement a production and export diversification strategy 	<ul style="list-style-type: none"> Develop Small and Medium enterprises policy and cooperative development schemes. Establish free trade zone Implement quality standards for export across all export products 	<ul style="list-style-type: none"> Develop policy on corporate governance. Put in place commercial courts and train judges in commercial law. Establish regional industrial parks and restructure of Kigali industrial park 	<ul style="list-style-type: none"> Develop public and private partnership law and policy. Implement investment and tax reforms 	<ul style="list-style-type: none"> Develop and implement competition policy
Decentralisation	Comprehensive five year local government capacity building (CB) needs assessment produced and agreed by all stakeholders	Comprehensive five year local government capacity building plans implemented	Decentralisation strategy, action plans and responsive interventions are developed using M&E data	MIS at central and local level effective	MIS at central and local level effective
Science and Technology	Technology Diffusion Fund is established to promote appropriate technology transfer in rural and periurban areas	National Commission of Science, Technology and Innovation established	Science and Technology Centres of Excellence established at six public institutions of higher learning	Capacity-building Fund is established for financing human and physical research infrastructure in the public and private Sector	A centre or a fund established to support training and research on development activities in value added enterprises
Gender and Social Inclusion	Social Audit methodology adopted by all districts and sectors	Annual gender status report institutionalised with 2007 as baseline			
AIDS	Public Expenditure Review in HIV/ AIDS	Employers (public and private) to implement the national HIV and AIDS workplace policy	Incorporate HIV/ AIDS variables in new research work and data analysis		

ANNEX 4: RECP-Relevant PSTA II Programmes

SP 1.4 Irrigation Development:

- Establishing the legal basis for water use rights and tenure rights for irrigation systems.
- Implementing pilots for pressurized irrigation on hillsides and “fertigation” systems.
- Organizing and training hillside farmers for water management, system maintenance, and management of finances for irrigation systems.

SP 1.5 Supply and use of agricultural inputs:

- Creating an appreciation among the farming population for the value of modern inputs in the productive process.
- Developing sustainable supply and distribution systems for inputs.
- Refining technical prescriptions for applications of fertilizers and other inputs, by crop, location and season.
- Implementing systems of quality control for the inputs distributed.

SP 2.1 Promotion of farmers’ organizations and capacity building for producers:

- Long-term relation with cooperatives for capacity building.
- Emphasis on governance and agribusiness management in capacity building.
- Community innovation centres to promote inter-farm exchanges.
- Farmer training centres as non-formal educational centres that provide specialized technical information to farmers and farmer organizations.
- Provision of specialized training on issues of product quality.

SP 2.2 Restructuring of proximity services for producers:

- Make extension accountable to farmers.
- Institute permanent, specialized training for extension agents.
- Certify lead farmers as trainers.
- Strengthen extension for market linkages and develop the role of extension agents as facilitators in the quest for information and knowledge.
- Utilize mass extension messages, especially on rural radio.
- Develop special participatory programmes such as fertilizer trials.
- Strengthen CICA as support institution, a source of technical information in written and electronic form.

SP 2.3 Research for transforming:

- Participatory research on farmers’ plots.
- Permitting farmers help set research agenda in regional research stations.

- Implementation of a competitive research funding mechanism.
- Giving priority to applied, adaptive research.

Promoting researcher participation in national alliances: participatory fertilizer trials, cassava value chain, appropriate mechanization, greenhouse trials, and training of extension agents.

- Adopting a holistic approach to research and extension.

SP 3.1 Creating an environment conducive to business and entrepreneurship development and market access:

- Accelerate the development of entrepreneurial capacity.
- Strengthen environment for agro-business, especially with reference to meeting international standards for export products.

SP 3.3 Development of non-traditional high-value export products:

- Specialized technical assistance in producing for quality, product handling, and identifying and accessing markets.
- Measures for bringing markets and producers together.
- Support for organic production, greenhouse development.
- Strengthening of horticulture research.

SP 3.4 Production and value addition for domestic staple products:

- From an overall view of selected commodity chains, identify the critical points where interventions could make decisive improvement in productivity and competitiveness.
- Combine farmer training, technical assistance and investments to maximize the synergies for each commodity chain.

SP 3.5 Market-oriented rural infrastructure:

- Facilitating public investment in agribusinesses under provisions for cost sharing and/or transfer to the private sector for operation.
- Using public-private partnerships to construct and operate key forms of infrastructure for agriculture.
- Improve the transport and electrification networks in rural areas, without which it is almost impossible to participate in markets for high-quality products.
- Lines of action relevant to RECP promotion:
 - New agro-processing facilities.
 - Facilities for handling and processing non-traditional export products.
 - Modernization of slaughterhouses and tanneries to comply with international sanitary requirements and to improve treatment of hides and skins.
 - Develop and implement a programme for improved collection and hygienic transport of raw milk to processing plants.

SP 4.1 Institutional strengthening and capacity building:

- Restructure the institutions of the agricultural public sector so that they can fulfil their functions more efficiently.
- Develop and retain a high level of professional capacity in those institutions.
- Capacity Building lines of action relevant to RECP promotion:
 - Create, under the aegis of MINAGRI, a unified and autonomous service or entity responsible for monitoring, controls and international communications for sanitary, phytosanitary and food safety issues.
 - Assess training needs in the agricultural public sector and formulate and implement a programme for technical capacity building in the agricultural public sector, including at the district level, that encompasses all relevant topics including specialized areas such as statistics, laboratory sciences, veterinary services, sanitary and phytosanitary systems, irrigation development, fisheries management, post-harvest management and agro-processing.
 - Assess the ways in which gender-related issues are handled in all programmes and develop a sector-wide gender strategy that will touch upon all activities, and carry out the related training in gender issues for all Ministry staff.
 - Develop a Leadership and Strategic Management Development Program for top leadership and senior management cadres in the agriculture sector and implement it through regular top executive seminars and workshops and selected study visits.

SP 4.2 Policy and regulatory framework for the sector:

- Assess the needs and aspirations of farmers and other actors in the sector as a guide to areas for which policies need to be strengthened or clarified.
- Hold consultations on sector policies before finalizing them and widely disseminate the policy documents once they are completed.
- Translate policies into laws and regulations where appropriate.
- Lines of action relevant to RECP promotion:
 - Develop a policy framework for agro-export development that specifies the policy instruments to be utilized, such as the above-mentioned support measures for certifications, trial shipments, farmer attendance at trade fairs, and sets guidelines for the degree of subsidy authorized in each case, along with policies for construction, leasing and sale of facilities for post-harvest management and agro-processing.
 - For control of pesticides and fertilizers, there is an urgent need for the Agrochemicals Law. The 1st draft of this Law has been produced and it needs to be completed and submitted to Parliament.

SP 4.3 Agricultural statistics and ICT:

- Use of modern statistical sampling procedures to ensure coverage of all crops, not only those occupying substantial acreage.
- Training in economic analysis of statistical results to obtain syntheses relevant for decision-making.

- Development of market information nodes for farmers.
- Collection of other kinds of relevant information such as meteorological data by location.

SP 4.4 M&E systems and coordination of the agricultural sector:

- Coordinating closely the contributions of development partners and government agencies, to ensure consistency of programmes and projects and appropriate levels of funding.
- Establishing systems for measuring progress in implementing programmes and obtaining feedback on the results.

SP 4.5 The decentralization programme in agriculture:

- Clearer rules for allocation of funds to local governments.
- Conditioning the allocations on the development local government plans.
- Strengthening mechanisms for local involvement in the design of programmes and projects.

ANNEX 5: RECP Relevant Environmental Policy Actions

Policy statement on Water Resources

- To ensure that water is used in the various economic and social sectors without endangering environment.

Strategic actions:

- To promote programmes for the harvesting, storage and use of rain water.
- To promote regional cooperation in the management and equitable utilization of cross-border waters.
- To ensure compliance with the regulations on water quality and waste management.

Policy statement on forests and protected areas

- To improve the conservation and management of forests and protected areas.

Strategic actions:

- To enhance better utilization and development of forestry products through the promotion of wood processing units by private enterprise.

Policy statement on Biodiversity

- To ensure the conservation and sustainable utilization of biodiversity of natural ecosystems and agro-ecosystems in compliance with the equitable share of benefits derived from biological resources.

Strategic actions:

- To ensure the rehabilitation of sites after mining and quarrying activities.

Policy statement on Agriculture, Livestock and Fisheries

- To promote environment friendly agro-pastoral and fishing methods and techniques.

Strategic actions:

- To develop environment friendly agricultural production systems.
- To reactivate agricultural inputs national programmes with a view to increasing agricultural production while complying with environment.
- To create awareness among the population on the impact of agricultural inputs.
- To relieve the agricultural sector by the creation of non agricultural employments.
- To enhance the practice of livestock stabling.
- To promote environment-oriented irrigation.

Policy statement on Transport and Communications

- To ensure compliance with environment in all transport and communications activities.

Strategic actions:

- to ensure that land, lake and air transport regulations minimize pollution.
- To prevent air and soil pollution by emissions of gases and heavy metals from transport equipment.

- To ensure the protection of areas bordering roads.
- To protect the population against noise nuisances and dangers from air, lake and land transport.
- To fight noise pollution by communication media (radio, portable telephones, television sets).
- To promote the use of non-polluting sources of energy in the field of communication (replacing cell batteries).

Policy statement on Trade, Industry and Tourism

- To integrate environmental aspects in commercial and industrial activities and promote environment friendly tourism.

Strategic actions:

- To control the quality of local and imported products.
- To regulate the location and management of industrial and market sites.
- To establish a system of information on prohibited, controlled products and potentially toxic products.
- To encourage the use of biodegradable packing products and the recycling of waste matter.
- To regulate the trade of fauna and flora products and their by-products.
- To control hygiene and cleanliness of markets, business areas and industrial sites.
- To promote less polluting transport and storage technologies and technologies for the elimination of industrial products and/or waste.
- To create awareness among tourists on the importance of environment quality.

Policy statement on Energy and Mining

- To increase energy supply while minimizing the negative impact on environment and ensure compliance with the environmental dimension in mining and quarrying activities.

Strategic actions:

- To promote diversification and utilization of alternative sources of energy (methane gas, solar, wind) and micro-hydro-electricity.
- To ensure compliance with security standards in the production, transport and distribution of energy.
- To ensure compliance with international standards in the emission of greenhouse gases due to utilization of energy.
- To regulate exploitation of mineral resources so as to protect environment.
- To regulate the treatment of mineral waste so as to limit or eliminate water pollution if possible.

Policy statement on Education, Information and Research

- To give the country an educational, information, sensitization and environmental research promotion policy.

Strategic actions:

- To include environmental studies in school curricula at the primary, secondary and tertiary level.

- To strengthen human and institutional capacities in the field of environment.
- To create awareness among the population in environmental protection.
- To promote environmental research and transfer of surveillance technologies.
- To facilitate access to the findings of environmental research.

Policy statement on Health and Sanitation

- To include health and sanitation at the centre of environmental issues.

Strategic actions:

- To establish a system for collection, transportation, repository and disposal of waste.
- To formulate a national strategy for specific management of chemical products and biomedical and industrial waste.
- To establish protection standards between dumping grounds and human settlements and water sources.
- To develop and strengthen institutional and technical capacities for the management, control and monitoring of unsuitable products.
- To establish an appropriate system for the conduit and disposal of waste water and rain water in towns and in settlements (IMidugudu).

Policy statement Economic Planning

- To integrate the environmental dimension in economic planning.

Strategic actions:

- To take into consideration the impact and the cost of environment in socio-economic planning.
- To mobilize and allocate the necessary financial resources for the protection of environment.
- To ensure the inclusion of the environmental dimension in socio-economic developmental projects and programmes.

Policy statement on Atmosphere, Climate and Disasters

- To take part in the establishment of a framework for early warning and management of natural and/or man-made disasters.
- To contribute to the establishment of a policy and legislation aimed at monitoring regularly climatic change and reduce to the strict minimum substances which pollute the atmosphere.

Strategic actions:

- To create a database on disasters.
- To strengthen the structures for the comprehensive management of disasters.
- To create a preventive early warning system.
- To implement the regulations relating to the prevention and management of disasters.
- To strengthen the meteorological and agro-meteorological monitoring systems.
- To develop a policy for the control of socio-economic activities likely to affect the climate.

Policy statement on Gender, Youth and Environment

- To mainstream gender in the protection of environment.

Strategic actions:

- To ensure the involvement of men and women in the protection of environment.
- To alleviate the tasks of housewives, especially in rural areas.
- To improve the economic and social conditions of poor households, especially those headed by women and children.
- To facilitate access of women to natural resources and empower them to control their management.
- To sensitize the youth from their early age in the protection of environment.
- To train and steer the youth towards non-agricultural employment so as to alleviate pressure on natural resources and environment.

ANNEX 6: RECP-Relevant Articles of the Environmental Law

- **Article 56:** The State shall establish appropriate standards for treatment of waste in order to produce more productivity. This provision stipulates that:
 - The responsible organs of State are obliged to promote and disseminate modern technical knowledge.
 - Establish means of properly recycling the wastes.
 - Establish appropriate methods of manufacturing and using certain materials in order to facilitate the recovery of elements in their composition.
- **Article 57:** The State shall promote the use of renewable energy and to discourage wastage of sources of energy in general and particularly that derived from wood.
- **Article 58:** The State shall take adequate measures to promote environmental education, training and sensitization in schools curricula at all levels. The Article stipulates that the creation of associations for the conservation of the environment may be encouraged and approved.
- **Article 59:** Competent authorities shall coordinate national activities and monitor the implementation of international conventions and agreements relating to environment.

Legislated Incentives:

- **Article 71:** Any activity aiming at controlling soil erosion and drought, one that aims at afforestation and forestry, using renewable energy in a sustainable manner, using modern cooking stoves and any other means that can be used to protect forestry, may receive support from the National Fund for Environment.
- **Article 72:** The National Fund for Environment (FONERWA) may grant support to public services, associations and individuals in case they invest or put in place campaigns or carry out activities intended to fight against causes of pollution or support existing installations so as to match with the environmental quality standards, in accordance with instructions of competent authorities.
- **Article 73:**
 - Industries that import equipment which assist in eliminating or reduce gases like carbon dioxide and chlorofluorocarbons which intoxicate the atmosphere and those which manufacture equipment that reduce the pollution of the environment, are subject to reduction of customs duty on the equipment and for a period to be determined depending on the needs, and it shall be governed by the law concerning taxes and revenues.
 - Individuals and moral persons that undertake activities that promote environment are subject to reduction on taxable profits in accordance with the law concerning taxes and revenues.

Control, Monitoring and Inspections:

- **Article 74:** Without prejudice to other provisions, competent authorities shall investigate and prosecute crimes provided for by this Organic Law and other related laws, are the judicial police officers, employees responsible for hunting, fishing, water, forestry,

national parks, protected areas, inspectors of work, customs inspectors, employees of Rwanda Environment Management Authority and other concerned employees determined by an order of the Minister having Justice in his or her attributions.

- **Article 75:** Without prejudice to other provisions, competent persons mentioned in article 74 of this Organic law determined by an order of the Minister having justice in his or her attributions may:
 - Enter residences and industrial or agricultural installations, depots, warehouses, stores and retail outlets.
 - Inspect installations, construction, houses, machines, vehicles, devices and products.
 - Have the right to inspect records relating to the operations of the enterprise.
 - Have a sample, measure, take and conduct a required research.
 - Suspend activities that appear to degrade the environment for a period not exceeding (30) days.
- **Article 76:** In respect of article 75 of this organic law, the competent persons shall refrain from objecting to and hindering the general investigation, impede any activity that is under inspection when it is not necessary for them to fulfil their obligations. They are also required to adhere to professional secrecy.
- **Article 77:** In case persons mentioned in Article 74 discover an infringement, they shall prepare minutes of proceedings describing what they saw or seized and indicate where the seized objects were taken. Competent administrative authorities conduct prosecution without prejudice to the functioning of the Prosecution Service.
- **Article 78:** Appropriate measures for the conservation of the environment shall be taken and standardization and management services for the environment shall ensure strict compliance.
- **Article 79:** Enterprises or operations that excessively pollute environment are subject to inspection by competent experts. The owner of the enterprise or operations meets expenses of such an inspection. The procedure through which such an inspection is conducted is specified by the order of the Minister having environment in his or her attributions. Findings of such an inspection are transmitted to the competent authorities.

Preventive and Punitive Provisions

- **Article 80:** Buildings, agricultural, industrial, commercial or artisan establishments, motor vehicles and other movable properties, that are productive, owned either by a person or by a public or a private association, shall be constructed, exploited and used in conformity with existing technical standards approved or indicated by implementation of the Organic Law.
- **Article 81:** The following are prohibited:
 - Dumping or disposal of any solid, liquid waste or hazardous gaseous substances in a stream, river, lake and in their surroundings.
 - Damaging the quality of air and of the surface or underground water.
 - Non authorized bush burning.

- **Article 82:** It is prohibited to dump any substances, in any place, which may:
 - Destroy sites and buildings of scientific, cultural, tourist or historic interest.
 - Kill and destroy flora and fauna.
 - Endanger the health of biodiversity.
 - Damage the historical sites and touristic beauty at the lakes, rivers and streams.
- **Article 83:** It is prohibited to dump in wetlands:
 - Waste water, except after treatment in accordance with instructions that govern it;
 - Any hazardous waste before its treatment. Any activity that may damage the quality of water is prohibited.
- **Article 84:** It is prohibited to keep or dump waste in a place where it may:
 - Encourage the breeding of disease carriers.
- **Article 88:** It is prohibited:
 - To dump, make flow, dispose of and store any substance in a place where it may cause or facilitate water pollution on the national territory.
 - To use natural resources in a degrading and illegal manner.
 - Release into the atmosphere poisonous gases, smoke, waste, soot, dust and any other chemical substances in an illegal manner.
- **Article 89:** In accordance with regulations provided for by International Conventions signed and ratified by Rwanda, it is prohibited to dump, eliminate, immerse any chemical substance in water and in any other place where it may.
- **Article 90:** It is prohibited:
 - To pile waste on unauthorized public places including public lands defined by law.
 - To import waste in the country.
 - To immerse burn or eliminate waste in wetlands by any process without respecting rules applied in Rwanda.
- **Article 91:** Acts related to purchase, sale, import, export, transit, store and pile chemicals, diversity of chemicals and other polluting or dangerous substances are prohibited in the whole country. An order of the Prime Minister determines a list of chemicals and other polluting substances that are not permitted.
- **Article 93:** It is prohibited:
 - To use explosives, drugs, poisonous chemicals and baits in water that may intoxicate or even kill fish.
 - To use drugs, poisonous chemical substances and baits that may kill wild animals and which may render them unfit for consumption.
- **Article 94:** It is prohibited:
 - To transport or sale the remains of a whole or part of an animal as well as plants of the protected species.
 - To fell trees in forests and protected areas and in national parks.

Annex 7: ENR Strategy Implementation Programmes

- i) Sustainable land management: focusing on improving land administration and land tenure security (through land registration services) and improved land use planning
- ii) Sustainable Integrated Water resources management
 - a) Watershed protection
 - b) Water quality monitoring
 - c) Water resources inventory
 - d) Regulating water utilization
- iii) Sustainable management of forest and biomass resources
 - a) Forest cover change
 - b) Access to forest and biomass products
 - c) Alternatives to wood and biomass products for energy sources
 - d) Promoting agro-forestry
- iv) Ecosystems conservation & improved functioning
 - a) Degraded ecosystems rehabilitated/ conserved
 - b) Biodiversity hotspots and fragile ecosystems protected
 - c) Proportion of total land surface covered by protected areas
- v) Sustainable mining and mineral exploitation
 - a) Mineral mapping and research
 - b) Mining and mineral processing technology improvement
 - c) Control of environmental pollution from mining
 - d) Institutional capacity building for OGMR and for smallholder (artisanal) miners
 - e) Investing in value-addition through processing and export marketing
- vi) Environmental sustainability of development policies, programmes and projects at national and local level
 - a) Environmental mainstreaming across sectors particularly Agriculture, Energy, Infrastructure, Industry
 - b) Decentralization for vertical integration
 - c) Finance and Planning for effective cross sectoral coordination
- vii) Policy, legal & regulatory framework for ENR management
 - a) ENR legal & regulatory regimes harmonized with other EAC Countries
 - b) Institutional Capacity of ENR Governance - Improving sector programming & sectoral coordination (ENR SWAP developed & operationalized)
- viii) Financing for & financial management in the ENR sector

ANNEX 8: RECP-Relevant Articles of the Water Law

Article 5: Water resources management

1° the principle of precaution aiming at preventing serious and irreversible risks for water resources, by the adoption of the efficient measures.

2° the principle of prevention of the pollution, with priority to the source.

3° the principles “user-payer and polluter-payer” according to which the user of water and the polluter support a significant part of expenses resulting from measures of prevention, of pollution reduction and restoration of the resource in quality and in quantity.

4° the principle of users’ association for the administrative management of water.

5° the principle that users of the public distribution services of drinking water and sanitation should play a major role in these services provided to them, according to the contributory capacity of users.

Article 15: General responsibilities

The Ministry in charge of water shall define the national water policy in respect of principles and priorities provided for under Articles 3 and 7 of this Law, after consultation with other Ministries and institutions concerned. The Ministry shall represent the Government in intergovernmental organizations with international and regional characters specialized in the matters related to water, and promote international and regional cooperation.

Article 17: Rwanda Water Authority

A special Law shall determine powers, responsibilities, organization and the functioning of the National Water authority.

Article 18: Water Interministerial Committee

There shall be established in the Prime Minister’s office a Water Interministerial Committee composed of ministerial department representatives concerned with water in their domain and whose supervision shall be by a Director in the ministry of water. It shall be consulted on all legislative drafts/Bills regarding planning in the water domain elaborated at the national level, as well as on matters of national, regional or international level.

Article 45: Bonus

A reduction of royalties or a “bonus” can be agreed to all persons titular of an authorization or a concession who deploy, in agreement with the competent administration, devices permitting to decrease the quantity of water used and to reduce the quantity of pollution. The existing installations have a five (5) years delay, from the publication of the present Law into the Official Gazette of the Republic of Rwanda to be in conformity with it.

Article 58: Special sanitation for waste water

Domestic, animal and industrial waste waters must be routed toward an individual treatment device before their rejection in the nature or being reused. This act is carried out in accordance with legal provisions relating to hygiene and sanitation.

Article 59: Sanitation facilities

Sanitation facilities of domestic, animal or industrial waste waters must be constantly preserved and meet requirements set by the Minister after consultation with other institutions concerned.

Article 76: Pricing

Modes of the cost recovery of water public service shall respect the following principles:

1° the access to water public service, be it at the boundary-marks' fountains or the individual connection, must always be payable.

2° full cost recovery of investment, renewal and exploitation are considered in fixing prices.

3° competent authorities fix prices and make them public.

4° underprivileged groups are considered in fixing prices.

5° tariffs are reviewed periodically taking in account the evolution of investment and exploitation conditions in accordance with the criteria defined by the relevant authority.

Article 78: Regular water testing

The service in charge of water distribution has to make a regular analysis of the distributed water under the control of public institutions in charge of that control. Expenses of analysis are ensured by distributor service or the authority who delegates.

Articles 81-89 stipulate preventive and punitive provisions including fines and jail sentences for water pollution and sanitation crimes.

ANNEX 9: RECP-Relevant Energy Policy Objectives

Biomass sub-sector:

- Production of wood for wood fuel and charcoal is recognized as an important rural economic activity and also an environmentally sound one which is to be encouraged by the removal of regulatory restrictions (these will in future only apply to natural woodland).
- Improved technologies for charcoal production and improved stoves to make more efficient use of biomass fuels are supported.
- Under-exploited forms of biomass such as papyrus and typha will be promoted (in particular the briquetting of such materials for cooking and heating).
- Promotion of other energy sources for cooking and heating such as biomass briquettes (peat, papyrus, waste), kerosene (using efficient and safe pressure stoves and lights), LPG, solar water heating and electricity (for users in the high end market).
- Dissemination of biogas digesters will be promoted to rural families which have the required animals and to schools, hospitals and other institutions where human waste can be transformed into biogas and slurry.
- Production of methane or other forms of energy from solid waste landfills or through gasification processes is also to be encouraged.

Biofuels sub-sector:

- Encourage careful research to be conducted into the potential of large scale biofuel production in Rwanda taking into account not just the direct costs and benefits, but indirect opportunity costs particularly in respect of potential reductions in food crops and import substitution or export cash crops, the implications for use of water resources and the environment, net employment implications and a detailed risk analysis.
- Support the development of small-scale biofuels projects which can supply biofuels appropriately and economically for particular applications e.g. remote rural grinding mills.

Electricity sub-sector:

- Enhanced access to electricity, particularly in rural areas.
- Reduction in the cost of electricity.
- Diversification in sources of electricity supply.
- Increased participation by the private sector in the electricity industry.
- Enhanced regional cooperation in electricity to reduce overall costs and improve security of supply.

New and renewable energy subsector:

- Further research and development of biogas, biofuels and technologies to utilize methane, peat, geothermal, solar and wind energy.
- Complement the technical side with investigations of the economic feasibility and social acceptability of using new and renewable forms of energy.

- Work with other countries and regional bodies so as to have research programmes which complement one another, rather than duplicating efforts and wasting scarce resources available for these purposes.
- Provide economically justified feed-in tariffs (based on avoided costs of production to the utility but recognizing the potential availability of international credits for greenhouse gas reductions) or other mechanisms to give incentives and reduce risks for electricity production from renewable sources.
- Establish norms, codes of practice, guidelines and standards for new and renewable energy technologies.

Household energy:

- Offer training and improved stoves to increase the efficiency in the use of biomass resources, recognizing that biomass will remain a dominant source of energy, especially in the rural areas, for the foreseeable future.
- Promote alternative forms of energy for household use, informing women in particular on energy source and technology choices in order to reduce the time burden and the health risks for women associated with current biomass energy usage .
- Alternatives are also to include expensive options for higher income households, notably LPG.
- Ensure that new technologies meet the highest health and safety standards – this applying in particular to LPG and kerosene stoves where some designs have been shown in other countries to be markedly safer than the stoves presently being marketed in Rwanda.

Agriculture:

- Facilitate agro-processing centres with appropriate energy alternatives, with emphasis on electrification in order to promote small-scale industry, employment creation and economic growth.
- Encourage energy efficiency in ploughing and transportation, where these activities are mechanized, and in irrigation, coffee washing stations, agro-processing and other agricultural activities.
- Support the commercialization of production of fuel wood and charcoal from woodlots and plantations.
- Investigate the possible trade-offs between production of crops suitable for conversion to bio-fuels and production of food and cash crops.
- Create an enabling environment for governmental institutions and private sector engaged in research and development into appropriate energy technologies for agriculture and options for energy products to be produced by the agricultural sector.

Industry and Services:

- Promote improved energy management practices, including the use of Energy Audits and follow-on energy efficiency and conservation measures.
- Create awareness of the importance of using cleaner energy sources where possible, with environmental performance being included in energy audits and energy management strategies.
- Encourage efficient use of alternative energy sources, particularly environmentally preferable ones.

- Improve coordination of institutions concerned with energy, industry and environmental issues.

ICT Technologies:

- Ensure sufficient, appropriate and cost effective electricity supplies to meet the ICT needs in both rural and urban areas.
- Promote and enhance use of modern information technology for planning, assessments, policy analysis, database networks and managerial services in the energy sector.

Transport:

- Promote energy conservation and efficiency through encouraging proper maintenance of vehicles and good driving practices.
- Encourage the development of affordable and well run mass transport systems so that the proliferation of individual goods and passenger vehicles is reduced.
- Reduce pollution by encouraging the use of environmentally friendly fossil fuels such as unleaded petrol and low sulphur diesel.
- Encourage research into alternative fuels for transport purposes, such as ethanol, methanol and biodiesel.

Gender Cross-cutting:

- The diversification of energy sources for cooking and lighting in the home has a high priority.
- In developing alternatives for domestic energy, attention is to be paid to health and safety as well as efficiency, cost and convenience.
- Women are to be sensitized on energy issues as well as being given opportunities to try out new technological options before they are disseminated more widely.

Environment Cross-cutting:

- Rwanda is committed to mitigating the adverse impacts of traditional energy supply chains and of developing and disseminating environmentally friendly energy technologies.
- Comprehensive environmental standards are to be set and strictly enforced for all levels of the petroleum sector.
- Wherever possible, development of environmentally sound energy is to be supported through accessing internationally marketable carbon credits through the Clean Development Mechanism (CDM) or through the voluntary carbon emissions market:
 - Applications will be made to obtain Certified Emissions Reductions (CERs) which require that project promoters can demonstrate "additionality", that is showing that the planned reductions would not occur without the additional incentive provided by emission reductions credits.
 - In other cases, Verified Emissions Reductions (VERs) will be pursued, using internationally recognized standards such as the Gold Standard on the Voluntary Carbon Standard to enhance their value in the voluntary carbon market. The proceeds from VERs will be invested by government in further renewable and sustainable energy projects.
 - Through the Capacity Building and Transactions Support project, Government is

committed to developing the capability to evaluate proposals for carbon credit projects and ensure that Rwanda maximizes the benefits that can be derived from the CDM programme and the voluntary carbon market.

Regional and International Cooperation:

- Participating actively in the formulation of the Regional Energy Master plans being coordinated by the East African Community (EAC), and similar regional energy planning by Common Market for East and Southern Africa (COMESA) and other regional initiatives.
- Regional strategies for efficient procurement, transportation and storage of petroleum products.
- Regional electrical power projects promoted under the auspices of The East African Power Pool (EAPP), The Nile Equatorial Lakes Subsidiary Action Program (NELSAP), which falls under the Nile Basin Initiative (NBI).
- Joint development with the DRC of Lake Kivu methane gas and petroleum exploration.

Research & Development:

- Technical R&D into innovative, environmentally-sound energy technologies, particularly in respect of biomass and other renewable energy sources.
- Social R&D, examining the practical aspects and social acceptability of utilizing and adopting energy technologies, particularly from the viewpoint of women.
- Economic and financial R&D, examining the costs, and benefits.
- Affordability of energy alternatives, the marketing and follow-up required for successful commercialization and the extent to which local communities and entrepreneurs, particularly women, can be encouraged to become energy suppliers.

Energy Subsidies:

- Resources available for energy subsidies are to be spent primarily on once-off capital subsidies to enhance access to modern forms of energy than on recurrent on-going subsidies to reduce the cost of energy to those who already have access.
- In the electricity sub-sector, the proposed Universal Access Fund, to which it is intended that all current electricity customers will contribute, will provide access subsidies.

ANNEX 10: Stakeholder Consultation

This chapter presents an analysis from consultations with key stakeholders regarding policy requirements, opportunities and challenges in mainstreaming RECP in Rwanda. Priority areas for mainstreaming RECP in Rwanda as well as opportune entry points are discussed. The analysis also considers existing and anticipated constraints with respect to considerations for those RECP priorities that could be easiest to implement and those that could be most challenging with the prevailing industrial and socio-economic circumstances of Rwanda.

Stakeholder Profile

The analysis identified key people, groups or institutions in Rwanda with potential influence for successful implementation of RECP and assessed institutional capacity needs for its mainstreaming. Potential support for RECP from industry, business and/or consumers is also discussed as well as potential Rwandan champions to support the mainstreaming effort. A discussion of a potential lead institution that can facilitate the mainstreaming of RECP is also presented. Consultations were held at policy level and technical level of relevant departments of the public sector.

Policy level consultations:

- Hon Minister, MINERENA
- Hon Minister, MINICOM
- Director General, REMA
- CEO, Private Sector Federation

Sector Technical Level:

Environment:

- Director of Environmental Regulation & Pollution Control, REMA
- Focal Point - Cleaner Production, RDB

Trade and Industry:

- Focal Point - SMEs, MINICOM
- Coordinator - Rwanda RECP Centre, MINICOM/PSF

Energy:

- Focal Point, Energy - MININFRA
- Focal Point, Water - MININFRA

Water and Sanitation Services:

- Focal Point, Environment and Research - RWASCO

Mining:

- Focal Point, Environment - OGMR

Key findings of Stakeholder Consultation on RECP Strategies

Key stakeholders at the technical sector level were introduced to best practice strategies for RECP in some EAC countries that include: (i) Good Housekeeping, (ii) Input Substitution, (iii) Technology Change, (iv) Onsite Recover/Recycle/Reuse, and (vi) Product Change. The discussions revealed differing opinions of priority area for mainstreaming RECP in Rwanda.

- “Onsite Recover/Recycle/Reuse strategy” was of the highest priority for implementation in Rwanda. The descending order of priority for the other strategies was “Technology Change”, “Input Substitution”, “Good Housekeeping” and “Product Change”.
- “Good Housekeeping and Onsite Recover/Recycle/Reuse” was ranked easiest to implement due to perceived low cost and “Input Substitution, Technology Change and Product Change” as most difficult due to perceived high cost.
- Challenges for achieving RECP strategies:
 - Lack of regulatory guidance
 - Lack of an incentives framework
 - Lack of information and expertise on RECP cost-benefit
 - Lack of skilled labour
 - Lack of access to cleaner technologies
 - Lack of external finance
- Need to categories RECP strategies by size of industrial enterprise:
 - Small manufacturers need to apply all strategies as they were mostly established without planning or design.
 - Larger industries mostly practice Good Housekeeping, Input Substitution and Onsite Recover/Recycle/Reuse strategies.
 - Larger industries in Rwanda however still use old technology and require assistance in changing technology and products.
- State policy originator, regulatory as well as financial institutions have more potential to influence the successful mainstreaming of RECP in the prevailing political and social-economic circumstances of Rwanda.
- Institutional capacity needs seem to be similar with those of the EAC countries despite the fact that the latter are significantly more advanced industrially.
- Emphasis of capacity building for awareness and appreciation of RECP among State authorities equally among the corporate world are mind-opening and should stimulate further discussion and appropriate action.

Institutional entry points

Consultations with key sectoral representatives revealed a strong opinion that sectoral institutions including Ministries, academia, research, financial institutions, NGOs as well as individual researchers, consultants and consumers could influence the successful implementation of RECP in Rwanda. Consultations confirmed the need for the existing cooperation between RRECPC and MINERENA/REMA, the Kigali University of Science and Technology (KIST), the National Institute for Scientific Research (IRST), the National University of Rwanda, MININFRA, RBS and

collaborating UN agencies, NGO's and International development organizations including UNIDO, UNDP, UN-HABITAT and GTZ.

Additional State and private institutions were recommended as likely to influence the successful mainstreaming of RECP in Rwanda that include: MINECOFIN/RRA, MINISANTE, MINALOC, MINAGRI, MIGEPROF, MINEDUC, MINIFOM/OGMR, PARLIAMENT, RNP, RDB, RURA, EVSA, KCC and Banks. Brief descriptions of the sectoral roles of the respective institutions as perceived in the consultations are outlined here below.

- MINECOFIN:** Inclusion of RECP in the MINECOFIN “checklist” for mainstreaming environmental sustainability in all sectors within the SWG Sector Strategic Plans and SWAp operational framework for the implementation of the EDPRS. The Rwanda Revenue Authority (RRA) would be a key player in the formulation and implementation of economic and financial incentives in RECP compliance.
- Banks:** Banks and other financial institutions already play an important role in compliance with environmental regulations by requiring EIA certificates for developments prior to granting loans. This approach could be taken by adapting comprehensive environmental risk evaluation of development projects that take into account RECP compliance.
- MINISANTE:** As a major producer of hazardous waste, the health sector should be directly involved in RECP mainstreaming. The Ministry of health is also key in sensitizing the public in linking RECP with hygiene and general healthy living as it is able to reach the wider public within routine health provision activities through primary health care facilities.
- MIGEPROF:** As the Ministry responsible for gender equality, its targeted interventions could include the promotion of RECP.
- MINALOC:** Mandated with decentralization of governance, MINALOC is well positioned to ensure RECP as a component of environmental sustainability in local governance. The Kigali City Council (KCC) is proposed as potential support for successful RECP implementation along the same rationalization but also as the enforcer of environmental regulations and standards in its jurisdiction.
- MINEDUC:** Environmental education is already mainstreamed in curricular at all levels of education in Rwanda with appropriate complexity. A framework therefore exists to update curricular with RECP. Early involvement of MINEDUC in mainstreaming efforts of RECP would facilitate faster curriculum updates.
- PARLIAMENT:** Parliamentarians are functionally influential in promoting transformative initiatives in national policy and in putting in place effective policy instruments as well as in sensitizing citizens in their respective constituencies.
- RDF&RNP:** The Rwanda Defence Force and the Rwanda National Police are very instrumental in environmental protection not only from the defence and law enforcement requirements but as respected and influential members of the Rwandan community. The RDF and RNP often participate in community activities for the protection and conservation of the environment such as national tree planting and clean nation maintenance making full advantage of the large numbers. The two organizations operate large fleets of vehicles and other equipment that demand substantial energy and other resources. RECP mainstreaming would greatly benefit from early partnership with RNP and RDF.

- RDB: The Rwanda Development Board is mandated with among others, investment promotion. RDB is therefore well positioned to influence an efficient and clean start of every material production investor, be it in agriculture or manufacturing industry. In fact, REMA delegated the Environmental Impact Assessment and Cleaner Production to the RDB one-stop-centre where centralize regulatory services are provided to the investor more efficiently.
- MINAGRI: Whereas Agriculture is a major contributor to the GDP, it is also a major consumer of energy, water and other resources. Although it not yet a major producer of waste, policies, plans, strategies and programmes are in place for market orientation as earlier described in the policy review section of his document. It is therefore an opportune time for Agriculture to embrace RECP as it transformed to industrial processing food and other produce for at internationally acceptable standards for local consumption and export.
- MINIFOM: As mentioned earlier in this document, mining activities in Rwanda are in urgent need of RECP strategies as expressed in the Mining Sector Strategy for 2010-2013. Mining is a sector with many hazards which have seen many deaths in Rwanda. Outdated technology is one of the aspects that need urgent attention together with other RECP strategies. It is therefore critical that the Rwanda Geology and Mining Authority (OGMR) and its line Ministry are directly involved in mainstreaming RECP.
- RURA: The Rwanda Utilities Regulatory Authority (RURA) is mandated with granting operating licenses and oversight of operational compliance to regulations of utility companies including ICT, energy, water supply and waste management. RURA can therefore play a central role in ensuring the integration of RECP in these services.
- EWSA: The Rwanda Electricity Water and Sanitation Company EWSA supply of bulk services of electricity and water and waste disposal respectively. RECP is key for sustainable bulk supply of energy and water as well as sanitation in urban areas. The policy framework, strategic and operation plans for the energy and water and sanitation as articulated by MININRA and as discussed earlier in this document are clear on the central role played by RECP in the sustainable achievement of MDGs.

Capacity requirements for mainstreaming RECP in Rwanda were discussed during consultation interviews. Common roles of the different authorities and stakeholders were introduced during interviews as points of discussion. These included: Development of policy, legislation and regulatory instruments to limit pollution/emissions into the air, water and land; Applying/enforcing policy, laws and regulations; Economic instruments through an incentives framework that rewards RECP and penalises non-compliance; Support measures for companies to promote RECP e.g. tax holidays and Accessing external assistance.

The list of capacity requirements was unanimously confirmed as pertinent for Rwanda, with some suggested additions: Awareness and appreciation of RECP benefits for authorities; Capacity building for corporate social responsibility, Capacity Building in Environmental Management Systems and Capacity Building in financial and economic analysis as well as opinion generation of RECP.

Consultations further revealed that business to business as well as industry to industry communication were effective support mechanisms that are already practice in Rwanda. It was further confirmed from the consultations that environmental risk evaluation and creation of “RECP exclusion lists” in loan applications by financial institutions was also functional in Rwanda. Public environmental education and awareness on RECP as well as consumer pressure groups for RECP compliance were very critically and should be promoted. Majority of key informants were in favour of MINICOM with PSF for championing RECP mainstreaming. However, the RRECPC was preferred as the lead institution for mainstreaming RECP.

Policy level consultations with the Hon Minister, MINERENA, the Hon Minister, MINICOM and the Director General of REMA confirmed support for an integrated approach for mainstreaming RECP in Rwanda. The Hon Minister, MINICOM observed that there was lack of coordination of activities aimed at the promotion and implementation of RECP in the country. The Minister recommended that a Ministerial Steering Committee with RDB as a key stakeholder chaired by MINICOM should be established for the coordination of RECP mainstreaming in Rwanda. She envisaged that MINERENA through REMA could maintain its regulatory mandate of monitoring and evaluation of policy alignment with regards to RECP mainstreaming.

The Director General of REMA recommended that a regulatory policy instrument that requires industries to demonstrate RECP compliance before their operating licenses may be renewed, while at the same time ensuring that support for RECP compliance is made available through a properly institutionalized national RECP Centre within MINICOM. REMA would continue to support RECP promotion through its existing initiatives such as the UNEP supported PEI programme that deploys REMA interns into ministries for the practical support of mainstreaming critical environmental considerations into sectoral policies, plans and strategies.

This proposition was supported by the Hon Minister, MINICOM while she also outlined the approach of her ministry that encourages industries to engage in self-regulation, putting in place market acceptability incentives, rewards by Rwanda Bureau of Standards (RBS) aligned to the “quality mark”, encouraging industries to always do more, appropriate taxes and looking at the “bottom line”.

Both Ministers of MINERENA and MINICOM as well as the Director General of REMA supported the proposal for the RECP mainstreaming strategy in Rwanda to be developed and submitted sequential as Cabinet Green and White Papers. The Hon Minister, MINERENA observed that RECP mainstreaming in Rwanda is complementary to Rwanda’s goal to continue on a Low Carbon Development Pathway. He explained that the RECP mainstreaming strategy was pertinent and timely as the GoR was preparing the revision of the EDPRS as it comes to the end its cycle in 2012 to integrate RECP for Managing Climate Change.



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