

PUBLIC EXPENDITURE REVIEW FOR ENVIRONMENT AND CLIMATE CHANGE FOR RWANDA, 2008-2012



Final Report



Facilitated By

Cornelius Kazoora
International Consultant
Sustainable Development Centre

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ABBREVIATIONS

BNR	:	National Bank of Rwanda.
CBD	:	Convention for Biodiversity
CBO	:	Community Based Organizations
CDF	:	Community Development Fund.
CDM	:	Clean Development Mechanism.
CEA	:	Classification of Environmental Activities
CEA	:	Cost Effectiveness Analysis
COFOG	:	Classification of functions of government
CPA	:	Country Programmable Aid.
CRS	:	Creditor Reporting System [OECD].
CSOs	:	Civil Society Organisations
DAC	:	Development Assistance Committee
DAD	:	Development Assistance Database
DAF	:	Director Administration and Finance
DFID	:	Department for International Development.
DG	:	Director General
DoL	:	Division of Labour
DPs	:	Development Partners
EAC	:	East African Community
EDPRS	:	Economic Development and Poverty Reduction Strategy
EICV	:	Integrated Household Living Conditions Survey
ENR	:	Environment and Natural Resources
FDI	:	Foreign Direct Investment.
FONERWA	:	National Fund for Environment and Climate Change
GDP	:	Gross Domestic Product
GEF	:	Global Environmental Facility.
GoR	:	Government of Rwanda.
HDI	:	Human Development Index
HDR	:	Human Development Report
IFC	:	International Finance Corporation.
IMF	:	International Monetary Fund
JICA	:	Japan International Cooperation Agency
JSR	:	Joint Sectors Review.
MCA	:	Multi-criteria Analysis
MDGs	:	Millennium Development Goals.
MINAGRI	:	Ministry of Agriculture.
MINALOC	:	Ministry of Local Government
MINECOFIN	:	Ministry of Finance and Economic Planning.
MININFRA	:	Ministry of Infrastructure.
MINIRENA	:	Ministry of Natural Resources.
MINITERE	:	Ministry of Lands, Human Resettlement and Environmental Protection.
MoUs	:	Memoranda of Understanding

MTEF	:	Medium Term Expenditure Framework.
NAFA	:	National Forestry Authority
NAPA	:	National Programme for Adaptation on Climate Change.
NGOs	:	Non-governmental organisations
NISR	:	National Institute of Statistics of Rwanda
ODA	:	Overseas Development Assistance.
OECD	:	Organisation for Economic Cooperation and Development.
PEER	:	Public Environment Expenditure Review
PEFA	:	Public Expenditure and Financial Accountability.
PERECC	:	Public Expenditure Review for Environment and Climate Change.
PER	:	Public Expenditure Review
PETS	:	Public Expenditure Tracking Surveys
PSF	:	Private Sector Foundation
RAB	:	Rwanda Agricultural Board
REMA	:	Rwanda Environment Management Authority
RLDSF	:	Rwanda Local Development Support Fund
RNRA	:	Rwanda Utility Regulatory Authority
RRA	:	Rwanda Revenue Authority
Rwf	:	Rwandan Francs
RNRA	:	Rwanda Natural Resources Authority
SAGAs	:	Semi-autonomous Government Agencies
SDC	:	Sustainable Development Centre
SEI	:	Stockholm Environment Institute
SMEs	:	Small and Medium Enterprises
ToR	:	Terms of Reference
UNCBD	:	United Nations Convention on Biological Diversity
UNCCD	:	United Nations Convention to Combat Desertification.
UNDP	:	United Nations Development Programme.
UNEP	:	United Nations Environment Programme.
UNFCCC	:	United Nations Framework Convention on Climate Change.
USAID	:	United States Agency for International Development.
USD	:	United States Dollars
VUP	:	Vision 2020 <i>Umurenge</i> Programme
WFP	:	World Food Programme

GLOSSARY OF TERMS

Public environment expenditure review:	This is expenditure by public institutions for purposeful activities aimed at the prevention, reduction and elimination of pollution or any other degradation of the environment resulting from human activity, as well as natural resource management activities not aimed at resource exploitation or production ¹ .
Vulnerability:	The degree to which a system is susceptible to, or unable to cope with adverse effects of climate change, including climate variability and extremes like floods, drought, epidemics.
Adaptation:	Activity intended to reduce vulnerability of humans or natural systems to actual or expected climate change impacts by maintaining or increasing resilience including possibility to exploit opportunities. Adaptation can be anticipatory or reactionary.
Climate Change:	A change in the state of the climate that can be identified by (e.g using statistical tests) by change in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer.
Resilience:	The ability of a system to withstand negative impacts [from climate change] without losing its basic functions.
Green economy:	This is an economy that results in improved human well-being and social equity, while significantly reducing environmental risks and scarcities ² and has in-built mechanisms of reducing emissions of greenhouse gases (GHG)
Climate proofing:	This is a shorthand term for identifying risks to a development project, or any other specified natural or human asset as a consequence of climate variability and change, and ensuring that these risks are reduced to acceptable levels through long-lasting and environmentally sound, economically viable, and socially acceptable changes implemented at one or more of the following stages in the project cycle: planning, design, construction, operation and decommissioning ³ .
Climate Finance:	This is finance flowing from developed to developing countries, including support for mitigation, adaptation, policy and capacity building. Mitigation projects include renewable energy projects, energy efficiency and fuel switch, forestry and land use, sustainable urban transportation and sequestration projects. Adaptation projects imply that part of the project is dedicated to a specific adaptation purpose such as water, agriculture, infrastructure, or capacity building or direct budget support for climate policy ⁴ .

¹ According to the World Bank , one can also look at climate proofing as the mainstreaming of climate change

² According to UNEP [2010] Green Economy Developing Countries Success Stories, UNEP Geneva

³ According to Asian Development Bank [2005] Climate Proofing: A Rio's Based Approach to Adaptation, Manila

⁴ According to UNEP [2010]: Bilateral Finance Institutions and Climate Change; A mapping of 2009 Climate Financial Flows to Developing Countries.

EXECUTIVE SUMMARY

This is a baseline report in Rwanda first, for covering the expenditure for environment, natural resources and climate change and second for covering both the public and private institutions and those of non-state actors and assessing the distributional equity for poverty reduction and inclusive growth. It was done under the auspices of UNEP/UNDP Poverty-Environment Programme in support of Rwanda's implementation of its second Economic Development and Poverty Reduction Strategy (EDPRS2) using the lessons from the implementation of EDPRS 1. The programme has entered the phase of long term capacity development to fully integrate environmental sustainability in the planning, budgeting and monitoring frameworks at sectoral and decentralized levels. Accordingly, the purpose for the review was to support that capacity development, and to evaluate the adequacy, efficiency and effectiveness of past expenditure from 2008 to 2012, which happens to have been the lifespan of EDPRS 1. The report is therefore timely as an input to the engagement processes of the sector working group, and identification of potential future investments. Its emphasis to make visible climate change and expenditure by non-state actors makes it different from the public environmental expenditure review of 2009.

The report is relevant for the Government of Rwanda government because as high as 73% of its population directly derives its livelihood from the natural capital. Likewise the contribution of environment and natural resources sector to Gross Domestic Product [GDP] and revenue is enormous, although that GDP is not yet adjusted for the costs of environmental degradation especially the loss of Rwanda scarce soils to the downstream riparian states. It was gratifying to find that Rwanda is in the process of piloting environmental (green) accounting. The recent Integrated National Household and Living Conditions Survey [EICV 3] revealed that it is the households dependent on natural capital that are extremely poor. Therefore, the obligation the government is faced with is that of introducing affordable and appropriate technologies, value addition chains, profitable nature based enterprises so that those active in the sector derive comparable returns like those in the off-farm employment

The call is urgent because EICV 3 showed that 34% of the population faces problems of environmental destruction and vulnerability to climate change. The worst hit households were found in Nyabihu [91.6%], Huye [79.1%], Kirehe [65.7%], Ruhango [62.9%] and Bugesera [60.8%]. The implication is that the financial resources among others, must be galvanized from all sources and partnerships so that the due share to all the sector is commensurate to their contribution to green growth, poverty reduction and the challenges at hand. Hence the theme of the report: *Sharing expenditure for poverty reduction, equitable and inclusive growth*. There would be a big risk that if the sectors do not command due share of the budget to address the peculiar issues in their sectors. The economy would not adequately adapt to climate change over which it has no control. A recent study estimated that the cost could reach 1 % of GDP by 2030. The highest population density of 416 people per kilometre in the world compels the government to search for home grown solutions that take cognizance of the historical socio-cultural, political and economic setting.

In addition to the EICV 3 mentioned above, the evidence in the report was derived from the aid database of DAC/OECD, DAD under MINECOFIN, the Budget Law and execution tables, and from Rwanda Local Development Support Fund [RLDSF]. The latter currently handles 33% of government and Development Partners funds to districts from a mere 1 % of 2002. It is therefore a very strategic institution in deepening decentralization. Equally important, data was generated from a participatory rapid appraisal using a tailor made budget tracking tool to almost all districts. Without it, it would have been difficult to estimate the expenditure of the end-users, especially that of private firms, NGOs, CBOs, communities and households. They have no data repository of their own. Suffice it to mention that the tool engaged both political and

technocrats at the district who in turn requested that all their data and information should be summarized for future use. Hence the details Annexes, particularly 3 to 7.

Two overarching observations from using diverse sources of information and strategies adopted need mention. First, there is no universally accepted boundary of what constitutes expenditure for environment and climate change. It depends on the choice of the country. Secondly, many interventions serve more than one outcome. For example, watershed tree planting in semi-arid Bugesera delivers on outcomes for environmental management, natural resources management, mitigation and adaptation to climate change, conserving biodiversity and combating desertification. Accordingly several strategies were employed including (i) avoiding double counting, (ii) limiting the analysis of evidence by source of data (iii) and relating data sets from credible sources, e.g. DAC/OECD, DAD in MINECOFIN, EICV3 by National Institute of Statistics in Rwanda. The underlying reasons for these strategies were to make the evidence credible, plausible and open to independent verification.

One of key findings is that the Government of Rwanda [GoR] has put in place enabling policies, legislation, institutional framework and strategies in the Environment and Natural Resources [ENR] Sector especially after 2005. Many of them are coming to an end. This presents the sectors and all stakeholders an opportunity to align the subsequent ones with EDPRS 2 priority themes and its foundational and cross-cutting issues on environment, climate change and disaster management.

Further, the capacity of the economy to generate its revenue under Rwanda Revenue Authority [RRA] to put on budget has been growing. The tax revenue as a percent of GDP is now 14.1%, giving Rwanda the middle ranking among the 5 East African States. Interestingly, districts were found to generate on average 5.6% of their internal revenue from the environment and natural resources. Gatsibo, Rulindo, Nyamagabe, Muhanga and Kamonyi districts' revenue was above the average of Rwf.134 million across 28 districts over a five year period. MINECOFIN too had previously estimated their revenue to be between 5% and 20%. Districts are set to implement several strategies to broaden that revenue by inventorying their natural resources to create databases, valuing and pricing correctly, outsourcing revenue collection and making *amategeko* [byelaws]. MINECOFIN, MINIRENA and MINALOC should hasten to guide them so that they adopt uniform practices, and in any case avoiding temptation to seek short term revenue at the expense of the resource sustainability. Preferably, RLDSF could consolidate all their revenues periodically and use the information in future to advise on how best to deepen decentralization. If the districts strategies are supported in time, the proportion of revenue from environment and natural resources could rise between 10% and 15% by the end of EDPRS 2 period. The rise could help to offset the projected decline of donor grants during EDPRS 2 implementation.

The newly established National Fund for Environment and Climate Change [FONERWA] which has attracted £22.5 million for 2 years from DFID is complementing the above sources. That is the value addition the GoR derived from REMA which led the operationalization of FONERWA within the framework of Organic Law No 4/2005. Strategically, FONERWA should not hesitate to take the advantage of being well funded now to leverage resources from the private sector, given that Rwanda's Foreign Direct Investment [FDI] of US\$ 106 million in 2011 is only rivaled by that of South Africa and Mauritius in Africa. In any case, in that partnership arrangement both will be moving in tandem to adopt green growth strategies.

With regard to Overseas Development Assistance [ODA], it has been growing to Rwanda since 2000. It is still very relevant because in the current fiscal year it contributed 39.8% to the budget. The trend for environmental related aid has grown since 2007 when environment is taken as "significant" objective but

falling when it is taken as the “principal objective”. The same pattern has been for climate change financing flows since 2008. At the receiving end, evidence showed that the share of ‘environment and natural resources’ is only 1.37% of committed funds and 0.87% of disbursed funds under DAD for the 39 projects out of 881 projects to the whole country as of 8th August 2013. The ODA report for 2011/2012 also ranks ‘environment and natural resources’ as the last but one after youth, culture and sports.

To MINIRENA, the parent Ministry for Environment and Climate Change, the share it actually used as a percentage of total government expenditure has ranged between 0.7% and 0.9% between 2008 and 2012.

Other budget agencies taking much more than the Ministry are MININFRA, MINAGRI and districts under earmarked funds. When one uses the ‘Environment Protection’ functional classification, one finds that the share on budget as a percentage of government budget rose from 1.4% in 2009/2010 to 2.5% in 2012/2013. In 2012, Rwanda’s environmental expenditure as a percentage of GDP was 0.89%, very comparable with that of developing countries shown in the report. It is too early to tell the likely consequences to the ENR sector from the decision between government and its development partners to implement the ‘Division of Labour’ [DOL]. Under this arrangement each DP will have a maximum of 3 programmes to reduce their transactions costs. Nonetheless, DOL is intended to improve efficiency and effectiveness of expenditure. Presently, the top DPs to the sector are United Nations [USD 10.6m], Netherlands [USD 7.7m] and Sweden [USD 5.4m]. MINIRENA has generally had good execution rates over the period, save for 2009 mini budget when water and sanitation was transferred to MININFRA, and NAFA was young while lands funding was delayed. In 2011/2012 fiscal year, lands and forestry subsector took the bigger share of 36% and 19% respectively.

Mainstreaming environment and climate change has come a long way partly reflected in the increase of funding to the sector over EDPRS 1 period. The power of consistent engagement, lobbying and advocacy cannot be under-estimated. The challenge which was found across all sectors and districts during EDPRS 1 implementation is that more effort and specific guidance is still needed. The government should therefore not lose the momentum and should hasten to seek appropriate technical assistance to fill the pending capacity gaps. The benefits associated with mainstreaming should be communicated emphatically upfront any capacity building programme.

It was found that RLDSF now channels as high as 33% of both government and donors funding from mere 1.4% in 2002. However, the shares to districts overall, and to the three interventions reviewed under it varied. Those interventions were in respect of environmental protection, water and sanitation, and energy. To note however, is the fact that some districts may have been funded much better before 2008 in those interventions or their support did not go through RLDSF or both. With that in mind, the share to environmental protection was 16%, while that of water and sanitation and energy were 5% and 9% respectively for the period 2008-2012. But what was clear is that the poor under the Vision 2020 *Umurenge* spent 47% of their budget on protecting the environment. The main lesson one gets is that whereas at “upstream” level of policy and budget allocation environment is not yet commanding a big share, at the “downstream” level among the custodians of the environment, it is prioritized.

Despite the lack of capacities, Rwandans are climate proofing many of their interventions. Notable examples include weather indexed insurance for the poor in agriculture, irrigation, crop intensification and diversification, relocating settlements and industries from the flood prone fragile ecosystems, and offering social protection to the poor under the auspices of Vision 2020 *Umurenge* among others. In addition, they are engaged in diverse ENR based enterprises like turning the ‘bads’ (waste) into “goods” (manure, briquette plastics), public cleaning, forest-based enterprises, orchard and commercial tree nurseries and eco-tourism. These offer entry points for strengthening their capacities, technology transfer for green

growth, value addition and youth employment creation. These are opportunities for FONERWA to consider in its funding strategy.

The ENR sector managed to make good progress on meeting the targets under EDPRS I implementation, but nationally, it would appear that the country will have a “red” mark against MDG 7 and MDG 1 meaning that these Millennium Development Goals[MDGs] will not be met by 2015. It was also found that vulnerability to environmental and climate change impacts exacerbate poverty. Likewise, districts whose households had low access to sanitation and energy were also found to be poor. Recently, African Development Bank committed funding to the tune of US\$ 45.1 million to scale up energy projects targeting 25,438 households, 179 schools and 29 health centres among others. It used the same analysis as has been used in this review to prioritize its support. ICT is the strategy to build a knowledge based economy under EDPRS 2, and that can’t be achieved without affordable energy.

No doubt, establishing adequacy, efficiency and effectiveness of expenditure in the vertical logic of development in the ENR sector with diverse outcomes is a challenge. The main weakness is that the indicators of performance are not reflected by each fiscal year to be able to relate the expenditures to both outputs and outcomes. That is a big gap to fill immediately under EDPRS 2. The recently established Single Project Implementation Units [SPIUs] in the sector should improve efficiency and effectiveness in the long run. There is also scope to introduce uniform unit costs for homogeneous interventions, but it appeared that due to the diversity of the sectors’ interventions, further specific study would be needed.

Given that inadequacy of funding is being reflected on poverty, vulnerability and failure to meet MDG7, the government needs to reconsider the share to the sector. That will allow it to take on new opportunities like green growth and to cushion the economy against the unknowns of climate change. Recent funding commitments by DFID, ADB and EU to the sector give a more optimistic picture for the sector to get a lot of funding under EDPRS 2 than the picture given by its costing.

Arising from all the above, the following recommendations are central to all the sectors playing their role to maintain the momentum from EDPRS 1:

- (i) Sectors should hasten to formulate their plans and align them with EDPRS 2, with output and outcome indicators by each fiscal year and with in-built components for capacity building and information gathering
- (ii) MINECOFIN, MINIRENA and MINALOC should hasten to support the districts in their strategies for revenue generation from the environment and natural resources as a strategy to deepen decentralization under EDPRS 2 implementation
- (iii) Government should build the capacities of MINECOFIN and FONERWA to tap climate change financing opportunities for all stakeholders
- (iv) MINECOFIN should broaden the ‘Environmental Protection’ functional classification to signal direction for innovation, EDPRS 2 implementation and how government priorities are changing
- (v) Development Partners need to consider all sectors for their cross-sectoral benefits from environmental and climate proofing point of to ensure that they support the sectors even when they start to fully implement the Division of Labour

1: INTRODUCTION

1.1 Background

1. **This report has been made under the auspices of UNDP/UNEP Poverty-Environment Initiative [PEI] implemented by Rwanda Environment Management Authority [REMA] since 2005.** Its goal is to enhance sound environmental management for poverty reduction, sustainable economic growth and the achievement of the Millennium Development Goals [MDGs] particularly MDG 7 on ensuring environmental sustainability with its linkage to MDG 1 on eradication of poverty and hunger. Building on past achievements, it has entered the phase for long term capacity development to fully integrate environmental sustainability in development planning and investment at national, sectoral and decentralized levels in the context of implementing and monitoring Economic Development and Poverty Reduction Strategy [EDPRS].
2. **It must be understood from the outset that the report has focuses on backward looking of EDPRS 1 implementation 2008-2012, and drawing lessons for forward looking for EDPRS 2 implementation 2013-2018.** Accordingly, two broad sets of activities were carried out, namely:
 - (i) Public expenditure review for environment and climate change, 2008-2012 under EDPRS 1 and building capacity to repeat the exercise in future through information gathering, sector engagement and stakeholder participation.
 - (ii) Assessment of the adequacy for planning, budgeting and monitoring expenditure for environment and climate change in both public and private institutions with a view of improving these for EDPRS 2⁵ implementation and supporting further capacity development among all stakeholders.
3. **The periodic reviews should continue to be a priority not only because Rwanda is a natural resource dependent economy, but also because financing was acceptable as one of the means for achieving sustainable development under Rio's Agenda 21.** However, the Environment and Natural Resources [ENR] sector should complement the reviews by commissioning analytical case studies to broaden the understanding of the impact of distributional equity of expenditure on human welfare and recovery of ecosystem functionality and improvement of public financial management systems in pro-poor targeting of scarce financial resources. The report has greatly considered some of these aspects and taken advantage of the wealth of data that has been generated since the Public Environmental Expenditure Review [PEER] conducted in 2009 on top of the data that was generated under the review with the use of a tailor-made budget tracking tool among the sectors and districts. The findings, observations, conclusions, key messages have been cross-referenced so that the report serves as one of the policy tools to guide the Government of Rwanda [GoR] in its pursuance of an all-inclusive economy and as a capacity building tool.

⁵ To note, EDPRS 2 also has the focus to pursue a 'low carbon green economy strategy'.

4. **Climate change has been given visibility throughout the report to signal the government's desire to mobilize all stakeholders to 'climate proof' EDPRS 2 implementation, hence Public Expenditure Review for Environment and Climate Change [PERECC].** The assignment was initially referred to as PEER but was rephrased during the inception phase out of demand to make Rwanda's priority on climate change visible to the ultimate users of the report. It has been written under the theme: *Sharing expenditure for poverty reduction, equitable and inclusive growth* to show what the ENR sector spends on one hand, and what other public institutions, districts, non-state actors and end-users spend on the other. A similar review in 2009 was written under the theme: *Putting Environment on Budget*.

1.2 Objectives, purposes and scope of PERECC

5. **The goal for the review is 'support to development of sustainable investment framework for successful environment and climate change mainstreaming'.** The purpose is to:
 - (i) evaluate the environment and climate change mainstreaming and appropriateness in the use of funds in the sector
 - (ii) articulate recommendations aimed at increasing efficiency of the country's public spending in the environment and natural resources sector [environment, climate change, land, forestry, mining and water resource management]
 - (iii) provide capacity building support in policy analysis, planning and budgeting and budget tracking and public sector analysis, among others.
6. **In terms of scope, the review covered the period 2008-2012, which was the lifespan of EDPRS 1.** It should be noted that before Rwanda joined the East African Community [EAC], its fiscal year coincided with the calendar year. Rwanda acceded to the East African Community Treaty on 18th June 2007 and became a member effectively on 1st July 2007. In 2009 it made a mini-budget for only six months as it waited to adopt the fiscal year of other EAC states that runs from July to June. Further, in some instances, the analysis went beyond the period 2008-2012 because of availability of data or covered shorter period where data was not up to date.
7. **Institutionally, the GOR wanted the review to cover all ministries and institutions, districts, Non-governmental organizations [NGOs], private sector as well as communities and households as shown in Box 1.1.** Traditionally, public reviews are confined among public institutions, hence the general term Public Expenditure Review [PER]. It was Rwanda's choice to broaden it where data and information permitted, and in any case for its policy relevance. Both the emphasis on climate change and expenditure by non-state actors and end-users make this PERECC differ from PEER of 2009 in terms of scope. The terms of reference [ToR] are provided in Annex 1. Although the findings of PERECC were expected to 'provide guidance on the actual drafting process for the sector on environment and natural resources as well as climate change mainstreaming for EDPRS 2 document drawing on lessons from sector engagement and PERECC' in accordance with the ToR, this was overtaken by events. This was because the author of this report was commissioned after EDPRS 2 had already been approved. Nonetheless, the report remains relevant during EDPRS 2 implementation.

Box 1.1: Coverage of PERECC 2008-2012 in Rwanda

A: Public, which includes

- Central government ministries
- Provinces and districts
- Public autonomous agencies
- Semi-autonomous agencies
- Programmes and projects by government

B: Private firms, NGOs/ Civil Society Organizations [CSOs]

C: Communities, households and end-users.

1.3 Relevance of environmental, natural resources and climate proofing

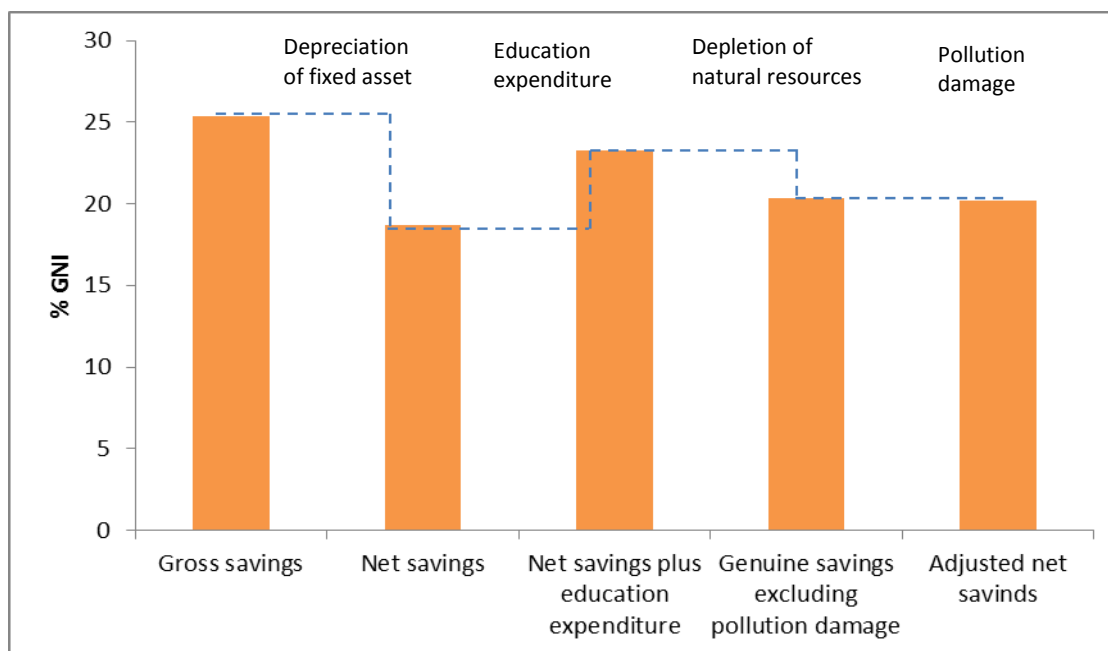
8. **The relevance of the review is demonstrated by the dependence of the population on environment and natural resources in many aspects.** Socially, Rwanda has a fast-growing population totaling 11 million people in 2011, with a population density of 416 people per square kilometer [NISR, 2012]. No doubt such population growth and perhaps the highest density in Africa and the world can contribute to environmental degradation because it increases the demand for resources for livelihood on one hand, and the pressure on the assimilative capacity of environment on the other.
9. **Another key feature of the demographic variables between 2003 and 2012 is that Kigali City has registered the highest growth in population of 48% [NISR, 2012].** That urbanization calls for re-orienting physical planning of the City with broadening access to gainful employment and social services and turning the “bads” like waste into “goods” that can stimulate new enterprises for employment creation within the framework of ‘Resource, Recovery and Reuse [RRR]business models’. Further, the fact that as high as 39% of the population lives in *imidugudu*⁶ compared to only 18% in 2005 is worth noting [NISR, 2012].
10. **In terms of employment, 72% of working individuals above the age of 16 have their own occupation in agriculture.** This sector accounted for 33 % of Gross Domestic Product [GDP] in 2012 at current prices and over US\$ 300 million of export earnings. The conservation of the country’s biodiversity and attractiveness for tourism generated over US \$ 120 million by mid-2012. Minerals accounted for 1 % of GDP and US \$ 164.4 million in 2011 from US \$ 96.2 of 2010⁷. As high as 99% of the population use biomass energy for cooking and even those who have access to electricity.
11. **Many countries, Rwanda inclusive are in preparation to pilot out environmental (green) accounting in order to adjust their Gross Savings for benefits from and costs to the environment.** The World Bank manages database on Adjusted Net Savings of countries. By definition, Adjusted Net Savings (also known as genuine savings), is a sustainability indicator building on the concepts of green national accounts. Given that Rwanda plans to adopt green (environmental) accounting, it is in order that it benchmarks its current status by the available data.

⁶ *Umudugudu/imudugudu* means village(s)

⁷ According to Statistical Year Book 2012

12. **Adjusted Net Savings** measure the true rate of saving in an economy after taking into account investment in human capital, depletion of natural resources and damage caused by pollution. Countries which have negative Adjusted Net Savings are considered to be implementing policies of **unsustainability**. Figure 1.1 shows Rwanda's Adjusted Net Savings derivation, while Table 1.1 benchmarks how Rwanda compared with other African countries in 2008. Zambia and Mozambique had negative Adjusted Net Savings as of 2008

Figure 1.1 Adjusted Net Savings for Rwanda, 2008



Source: World Bank Database on countries Adjusted Net Savings.

Table 1.1: Adjusted Net Savings of Rwanda compared to other African countries, 2008

Country	Gross savings (%)	Adjusted net savings (Genuine savings)(%)
1. Rwanda	25.40	20.16
2. Mauritius	16.52	8.84
3. Malawi	29.32	25.20
4. Swaziland	10.71	7.18
5. Botswana	46.30	37.39
6. Lesotho	17.83	19.50
7. Uganda	12.63	3.27
8. Zambia	21.37	-0.42
9. Mozambique	7.35	-4.47

Source: World Bank Database on Adjusted Net Savings.

13. **As highlighted earlier, Rwanda's population generates a lot of demand for survival strategies.** Currently, its imports value far outweighs the exports value, thereby making the country's trade balance deficit increase over years [Table 1.2]. Efforts to cushion the gains so far registered by 'climate proofing' all investments must be stepped up given that past climate change variability shocks have been estimated that they could reduce GDP by close to 1% by 2030 [SEI 2009].

14. By current status, Rwanda is one of the poorest countries despite the consistent determination and political will to propel the country into a middle class economy by 2018.

Table 1.2: Socio-economic and environmental trends and at status, 2008-2012

Indicators	2008	2009	2010	2011	2012
1. Human Development Index (HDI)	0.409	0.417	0.425	0.429	0.434
2. Global ranking of Rwanda (out of 186)			152		167
3. Total population (millions)	9.8	10.1	10.4	10.7	11.0
4. Rural population (%)					85
5. Urban population (%)					15
6. Population density (km ²)	373	384	395	408	416
7. % population below poverty line					44.9
8. GDP per capita (in constant of 2010 prices, US \$)	502	519	540	568	644
9. Trade balance (US \$ million)	-613	-768	-786	-1101	-1376
10. Annual inflation rate (%)		10.3	2.3	5.7	7.9
11. Exchange rate US \$ to Rwf.					680
12. Population using biomass for cooking ⁸ (%)					99.2
13. Population access to water (%)					75
14. Population access to improved sanitation (%)					75
15. CO ₂ emissions per capita (tons)	0.74	0.79	0.84	0.89	

1.4 Environmental and Climate change challenges and opportunities

15. **As Rwanda enters into the implementation of EDPRS 2, it should address the remaining environmental and climate change challenges and take advantage of past achievements and emerging opportunities.** First and foremost, other than being a small landlocked country, Rwanda always described as a country of 1000 hills is not environmentally and bio-physically homogeneous. It has a watershed between the major Congo and Nile drainage basins running from north to south with close to 80% draining into the Nile and 20% into Congo Basin. Mountains and hills dominate central and western Rwanda, while the east towards Uganda consists of savanna plains and swamps. Rainfall varies geographically, with the West and North West of the country receiving more precipitation annually than the East and South East.
16. **Inevitably therefore, the vulnerability of the country to climatic conditions and resultant impacts differ in Rwanda, implying that one would equally expect that the cost of maintaining the productive ecosystems and climate proofing differ.** Nationally, it has been reported that the country loses 10 tons of arable land to erosion every year⁹. It has not been studied in Rwanda whether the **replacement cost** in form of chemical fertilizers is good enough to restore the productivity of the land in a comparable manner to, for example, using agro-forestry.

⁸ That includes firewood, charcoal and crop waste

⁹ Rwanda State of Environment and Outlook 2009, pg 14

17. **Secondly, although as high as 73% of people are employed directly in the nature based sectors of rain-fed agriculture, fishing and forestry, mining and tourism, it is also true that they are the ones classified as extremely poor** [NISR 2012]. Of those extremely poor, it is reported that almost 25% are in agriculture, fishing and forestry; 29% are in mining and quarrying and 18% in tourism and recreation [ibid]. The interpretation is that to date these sectors are not primary drivers of poverty reduction. Poverty under EICV 3 was judged by comparing the consumption measure with the poverty line first set under EICV 1 in 2001. This means a poverty line of Rwf. 64,000 per adult equivalent per year in 2001 prices and an extreme poverty line of Rwf. 45,000. The three poorest districts from EICV 3 are Nyamagabe, Karongi and Nyamasheke.
18. **Reversing the above situation calls on the government to enhance its efforts in introducing appropriate and affordable technologies, value addition chains, profitable natural resource based enterprises so that those engaged in the ENR sector derive comparable returns to those in off-farm employment.** No doubt, investing in human capital is also critical for the Rwandans to compete for employment in industries and services not only in Rwanda but also in the East African Community [EAC] and beyond. That is the long term solution to reducing over-dependency on the natural resource base for survival strategies. In the short run, it is only logical to harness the power of the natural capital as kingpin for development.
19. **Presently, as high as 34% of the population has faced problems from environmental destruction and vulnerability to climate change¹⁰.** They are distributed as follows:

Reduction in agricultural productivity	9.2%
Erosion	8.3%
Destructive rains	5.6 %
Climate change	5.0 %
Famine/ drought	3.4 %
Loss of soil fertility	1.2%
Floods	0.9%
Other	0.3%

20. **Thirdly, it has been reported that percentages of households with unacceptable food consumption are especially high in rural areas bordering Lake Kivu (42%) and west and east of the Congo Nile Crest (43% and 29% respectively) where soils are less fertile and the land more susceptible to erosion.** *Nutritional status* is the balance between the intake of nutrients by an organism and their expenditure in the processes of growth, reproduction and health maintenance. Consequently malnutrition is any condition caused by excess or deficient nutrient intake. At district level, Rutsiro (53%), Ngororero (44%), Rusizi (49%), Nyamasheke (37%) and Karongi (37%) have the highest percentages of households with unacceptable consumption [MINAGRI, NISR and WFP 2012]. The policy implication is that continued vulnerability to environmental stresses in some districts could reverse the achievements so far gained in controlling diseases (e.g. malaria) since good nutrition helps peoples' bodies to be defensive.

¹⁰ According to EICV 3: Environment Report

21. **The high population growth rate over the last 10 years [4.0%] and density [1,556/ km] in Kigali City in search of gainful jobs, trading and education poses challenges and demand for descent housing, transport, waste and waste water management among others¹¹.** No wonder among its priorities for the next 5 years, the city intends to rehabilitate Gikonko Industrial Park, Nyabugogo wetlands, upgrade 2 informal settlements and relocate residents from at least two fragile hill slopes/ high risk areas. These interventions have the benefits of 'climate proofing'.
22. **Rwanda's strategy to pursue a green economy gives it a great opportunity to re-echo its past progress for sustainable development to its citizens.** That strategy should go beyond literally greening certain urban and rural settlements to also include infrastructure, transport systems, technology, product value-chains, consumption life styles, procurement policies and legislation, curriculum development and above all mindsets. The fact that Rwanda is being visited by Regional policy makers and technocrats to learn how it has ensured a clean City of Kigali cannot be taken as a light achievement.
23. **Rwanda should also build upon its milestone of establishing the National Fund for Environment and Climate Change [FONERWA] to foster resource mobilization, inter-institutional coordination, planning, capacity building and outreach communication so that all sectors and stakeholders mainstream environmental issues and adopt to climate change in a cost effective and harmonious manner.** The long term benefits and cost savings could rival or even surpass those of some African and other countries that have set up independent Climate Change Authorities(e.g Nigeria); those in the process of doing so (e.g Kenya) and even those that have enacted Climate Change Acts(e.g Philippines).The DFID support of £22.5 million to FONERWA in 2013 for two years should be used as a catalyst to leverage other sources of financing to the sector and other sectors particularly from the private sector and philanthropic foundations. The policy implication is that the capacity of FONERWA must be built immediately in resource identification and mobilization before DFID funding runs out.

1.5 Methodology and approach

24. **The methodology used to describe the findings, implications and lessons from the PERECC was dictated by four main factors,** namely :(i) the requirement for capacity building and sector engagement as part of the review process (ii) the institutions that the GoR wanted to be covered under the review and (iii) the source of data and information, and how they mark expenditure as being relevant for environment, natural resources and climate change and (iv) the government's charts of accounts and budget codes used over the fiscal years 2008-2012.
25. **The analysis and policy implications drawn have been alluded to in the goal and purpose already covered in section 1.2.** Suffice it to reiterate the desire by the GoR to improve quality of life in the long run through sustainable environmental governance and to establish the distributional impacts of expenditure, particularly on poverty reduction and maintenance of ecosystem functionality.
26. **A participatory rapid appraisal of the planning and budgeting process was also carried out using a tailor-made budget tracking tool that solicited for major interventions and their budgets under the respective years covering districts, private sectors firms, NGOs, CBOs, and**

¹¹ According to City Development Plan 2013/2014 -2017/18 Priorities

communities in those districts.¹² This process which engaged all sectors and institutions generated new knowledge on some aspects e.g revenues from ENR by district and strategies to enhance revenues, practices of climate proofing, assessment of the adequacy of funding by districts, and priority capacity development needs at district level. Although some of these findings were not directly called for under the ToR, the fact that they offer new areas for support to Rwanda, they had to be documented.

27. **The use of a budget tracking tool overcame the lack of a single repository for private sector level expenditure, districts, and non-governmental organizations.** Without this tool, it would have been difficult to get evidence of expenditure by the **end users** as was required by the TOR. Sector and district level staffs were centrally trained to use it, with emphasis to collect the data that could be accessed within the time frame and categorized in a manner to lend itself temporal and to inter-district comparisons. Where the staff failed to get the data, they left those aspects unfilled. This explains in advance why in some analysis, the number and names of non-responding districts feature in the report. This process conferred ownership to the districts' staff and sector specialists as was required under the ToR. The staffs' requests to be given more time after realizing that they would use the information beyond the review were accommodated within the duration stipulated for the assignment.
28. **All the above sources of data and information were complemented with interviews and review of relevant documents and literature and sector engagement that span over five months.** Annex 2 provides the list of all those that either guided the review or provided data and information or both. On the other hand, Annex 3 provides the list of participants that attended the validation workshop and provided additional guidance on the content, style, structure for the final report before they unanimously approved the draft report.
29. **With respect to other sources of data and information, the following are worthy mention:**
 - (i) the data the donors use when offering aid to GOR, NGOs, e.t.c as by their home practices.
 - (ii) the data GoR uses within the auspices of functional classification of government operations internationally set by International Monetary Fund [IMF] and drawing up the laws determining the state finances for each fiscal year.
 - (iii) Development Assistance Database [DAD] within the Ministry of Finance and Economic Planning[MINECOFIN]
 - (iv) Rwanda Local Development Support Fund [RLDSF] which currently absorbs over 33% of both government and donor funds and is used as an intermediary to fund local government entities.
 - (v) GOR's budget and execution reports as well as joint sector reviews
 - (vi) Data and information from Development Partners (DPs) websites
 - (vii) Data and information from National Newspapers
 - (viii) Data from EICV 3 carried out by NISR in 2012 which is disaggregated by district
 - (ix) Data from the previous PEER of 2009

¹² Only two districts of Nyamugunge and Nyanza were not included in this process

30. According to DAC/OECD, aid to environment is categorized as follow:

Principal: if aid is intended to produce an improvement or something that is diagnosed as an improvement in the physical and /or biological environment of the recipient country, area or target group concerned e.g. making an environmental policy, or building capacity for environment management.

Significant: if aid includes specific action to integrate environmental concerns with a range of development objectives through institutional building and/or capacity development e.g. land reform, decentralization policy.

31. To note is that DAC/OECD continually updates its database and users in Rwanda should take interest to periodically ascertain new developments. Likewise, with regard to Climate Change, aid was considered:

Principal: if according to UNFCCC it targeted an activity of the recipient country e.g . Second Communication by Rwanda to UNFCCC.

Significant: if according to UNFCCC it was targeting relevant but not principal activity of the recipient country e.g. rain water harvesting in water stressed areas.

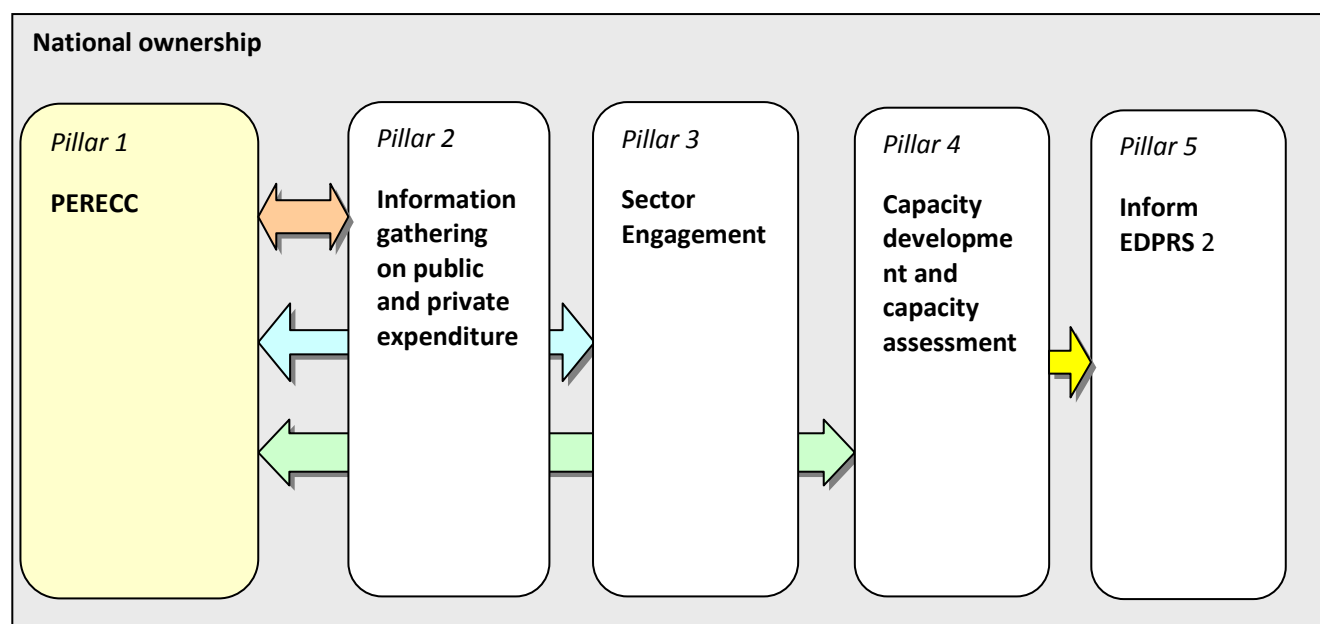
32. Initially only climate change mitigation activities were marked until 2010 when those of climate change adaptation were also marked. To note, donor countries applied similar methodologies of marking aid to other Rio conventions of CBD and UNCCD.

33. **At the receiving end in Rwanda, it is not the donors' classification that is used; rather one finds in Development Assistance Database [DAD] in MINECOFIN that the relevant sector is 'Environment and Natural resources'.** MINECOFIN manages DAD that compliments existing public finance management system and helps to overcome the gap of tracking ODA to Rwanda. Based on it, the government has published 3 reports of ODA to Rwanda, showing its allocation by sector, including environment and natural resource for the years 2010, 2011 and 2012. Although it is still under improvement, DAD is a very useful source of data to various users including the general public. In its current form, it does not have a sub-sector on climate change although some of the projects under the category of environment and natural resources equally benefit climate change. As MINECOFIN further improves DAD, it should take into consideration how it can track the distributional equity of donor funding to all sectors and districts over time, and ultimately evaluate its impact on service delivery and human welfare.

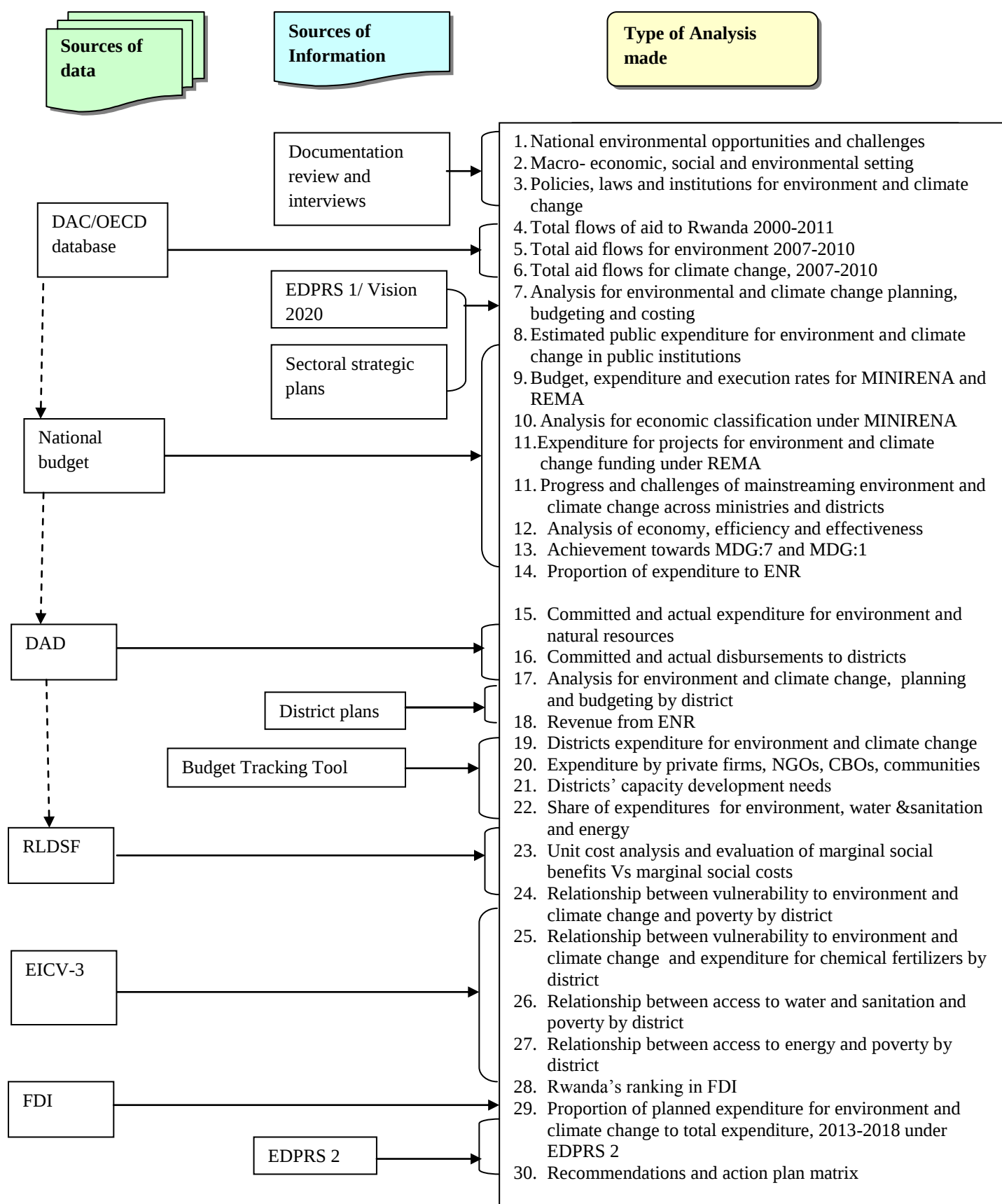
34. **Some of the development assistance to Rwanda through DAD is combined with internally generated revenue by Rwanda Revenue Authority [RRA] when MINECOFIN releases the Organic Budget Law every June for the subsequent fiscal year.** The Prime Minister's Office sells these laws to whoever wants at a nominally low price of Rwf. 1000 [equivalent to US \$ 1.50 only] to allow access to information on national budget to all stakeholders. Excel sheets were made to show the distribution of expenditure not only under the parent Ministry but also across all other ministries, particularly where the identification of programmes, sub-programmes and budget codes could be consistently established across the five year period of the review from the budgets and execution excel sheets from MINECOFIN.

35. **However, it has to be noted that some of the ODA is delivered through projects and does not become reflected in the budget laws.** Evidence from this report should inspire MINECOFIN to even move faster, including justifying to Rwanda's Development Partners (DPs) the need to use the government systems as the only way to improve nationally pro-poor targeting of expenditure and its analysis for its impact on poverty reduction and human wellbeing.
36. **Since it was of particular interest to analyse the distributional impacts of expenditure, it became necessary to obtain and analyse all expenditure through Rwanda Local Development Support Fund (RLDSF), formerly Community Development Fund (CDF).** It was gratifying to find that RLDSF Secretariat has compiled distribution of funding from 2008 to 2012 by districts. The three interventions which were specifically studied relate to: expenditure for environmental protection, expenditure for water and sanitation, and expenditure for energy¹³
37. Energy was deliberately included because EDPRS 2 considers Information Communication Technology [ICT] as an important aspect of developing a knowledge based economy and for transforming Rwanda into a middle income status. The district disaggregated data published by National Institute of Statistics under Demographic Household Living Conditions Survey 3[EICV 3] covering the whole country was also used in the analysis.
38. **Figure 1.2 shows the main pillars for the review process.** In accordance with TOR, PERECC was the 'entry point' for information gathering, sector engagement and capacity assessment and capacity development. As the figure shows, the first four pillars were not mutually exclusive as each fed into the other, as reflected by the arrows. Collectively, they all produced lessons to inform the implementation of EDPRS 2 and to trigger additional investments. Figure 1.3 summarizes how the evidence reported in this report is directly linked to the source of data and information. This was deliberately intended to allow for independent and objective verification of evidence, and to make the policy implication as much plausible as possible.

Figure 1.2: Main Pillars for the PERECC process in Rwanda



¹³ To note however, is that some expenditure to the districts in the three interventions does not necessarily go through RLDSF.

Figure 1.3: Sources of information and type of analysis made for PEREC Rwanda, 2008-2012

1.6 Limitations and strategies to overcome them

39. **As alluded to earlier, several repositories of data to track public expenditure for environment and climate change are continually being upgraded for decision making.** Sector specialists in Rwanda will have to keep abreast with such changes for future reviews. Even with changes being tracked, it is doubtful that the repositories will adopt uniformity and consistency in the way they mark financing as relevant for environment and climate change. For example, even within Rwanda, the term used under DAD in MINECOFIN is 'environment and natural resources', while under RLDSF the expenditure for water and sanitation is separated from that for environmental protection. The strategy adopted was to limit the analysis to the specific source of data and to reference it for the reader who wishes to make independent verification and additional analysis. This has been clearly shown in Figure 1.3.
40. **Training and orienting stakeholders to the review process to enable them develop *consensus ad idem* was made an integral strategy to their participation in sector engagement and information gathering.** It should be upheld in future to address problems of staff turnover and loss of institutional memory. In that respect, the PEER Manual for Rwanda made in 2009 was used.
41. **Some of the expenditure for environment may equally deliver on outcomes for natural resources management, climate change, biodiversity conservation and combating desertification.** The strategy was to recognize it as such from the sources of data and to **avoid double-counting**. That message had to be strongly emphasized in the orientation training prior to the review processes. Double counting can only be avoided by reading the notes and guidelines that accompany the different data sets from their respective sources.
42. **The greatest limitation is that whereas the organic Budget Laws are very detailed, when it comes to reporting the execution, MINECOFIN summarizes it in few excel tables.** For example, Law No.24/2011 for the FY 2011/2012 is 578 pages long, but the excel sheets summarizing execution are only 22 pages long. The mismatch between the budget and execution excel sheets denies some details in the analysis for the review. Further, the budget shows how the government and DPs contribute to sectoral programmes and sub-programmes, but the execution excel sheets do not bring out that by each programme and sub-programme. Rather instead, they show the entire macro picture for the whole economy. It would therefore be prudent that sectors, including ENR sector get good understanding on how MINECOFIN communicates the budgets and execution in drawing up the TOR for such reviews in future to avoid ambitious expectations. The main strategy to overcome the above mismatch is to commission stand-alone studies with in-built components to generate new data.
43. **A related limitation is that the investments in the sector do not show the ranking of the programmes or sub-programmes using well known decision criteria like cost-benefit analysis, (CBA), Cost effectiveness analysis (CEA), Multi-criteria Analysis (MCA).** Instead, one observes that the practice has been to either repeat the programmes and sub-programmes from either the previous Action Plans or Organic Budget Laws in new budgets.

44. **Under such a practice, to combine a public expenditure review with economic analysis of investments when their design did not benchmark the expected costs viz-a-viz benefits is overstretching.** The usual main problem in reconstructing costs and benefits in **retrospect** is riddled with loss of institutional memory because of staff movements and turnover. Otherwise failure to make informed decisions or choices on the basis of the above decision criteria in the private sector can lead to business failures, bankruptcy, deregistering firms and vulnerability to competition and economic and financial shocks. It would therefore be imperative that under EDPRS 2, some of the above decision criteria start to be applied, at least to some public projects.
45. **Special attention was given to the last expectation on economic analysis of impacts of investments during the inception phase mainly because it was expressly requested under the ToR.** Unfortunately, during the same phase, it became apparent that conducting such analysis for unspecified number and type of investments and quantifying their impacts on human well-being at household level in addition to carrying out a comprehensive review like this would have compromised the in-depth analysis for the review, which was the principal subject matter of the assignment. Equally, it would have divided the time and attention of sector specialists and district staff between collecting data for economic analysis on one hand, and administering the budget tracking tool on the other. The strategy that was adopted was to link the review to a fully funded study on the ***“assessment of the economic, social and environmental benefits of the Rubaya Demonstration Project-Gicumbi District, and the benefits of the project replication”***¹⁴. Even though the above study was commissioned earlier than PERECC, the latter was concluded before the economic assessment was finalized. The practice that many countries have adopted to carry out extensive reviews like this one is to break down the review into sub-themes and allocate each to one consultant but with an overall team leader. It is for this reason that comprehensive reviews are staffed by 4-6 consultants on average. The responsibility for all the deliverables of this PERECC was placed under an individual international consultant.
46. **In addition, the review process raised interest and demand for additional tasks which were neither in the ToR nor could be accommodated within the time and resources available.** Notable examples include the demand for estimating expenditure for environment and climate change that would be adequate under EDPRS 2, cost-benefit analysis of the expenditure for the ENR sector, developing an integrated monitoring system with indicators for the sector and training in environmental (green) accounting and resource valuation. The strategy was to recommend the commissioning of topical and stand-alone studies to complement the expenditure review and to conduct capacity building programmes during EDPRS 2 implementation.
47. **A critical limitation is that the sector specialists are not literate in public financial management systems on which any review like this one is anchored and the culture of reading public documents is low.** The strategy therefore is to conduct basic financial literacy among the sector specialists and to re-emphasize that they have to constantly read the government documents and guidelines explaining the planning and budgeting processes.

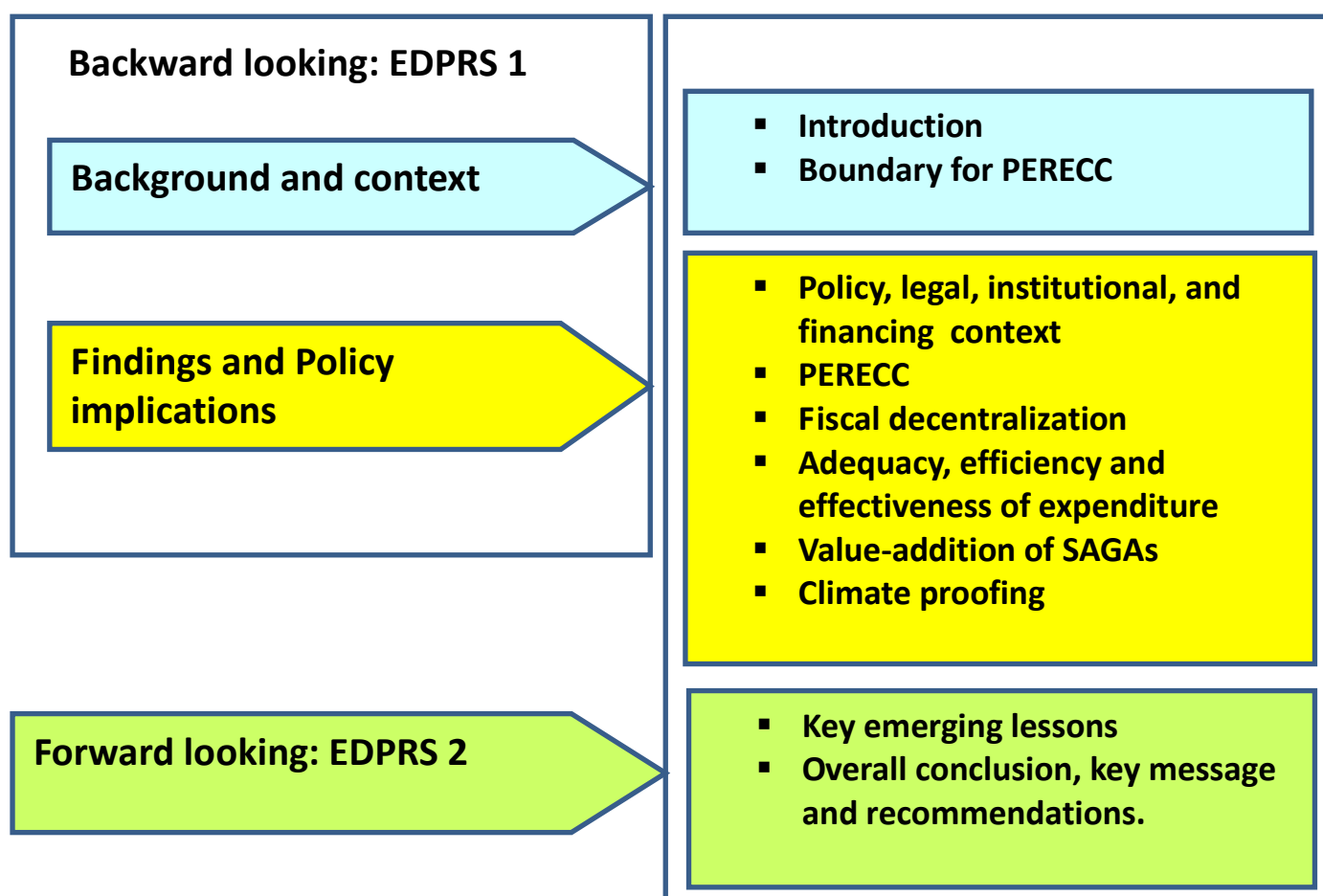
¹⁴ That was reflected in the Final Inception Report

48. Additional aspects for enhancing their capacity for fruitful engagement in future are to train them in how the government plans, budgets and reports expenditure.
49. **Finally, the review process was so involving that it could not conveniently be combined with capacity development, especially in disciplines like climate proofing, environmental resources economics, policy analysis and advocacy which were equally on high demand.** The strategy was to recommend that these be translated into long term and short term modular training programmes in Rwanda.

1.7 Structure of the Report

50. The structure of the report is made of 3 broad parts in accordance with the ToR contributing to the 10 chapters as shown in Figure 1.4

Figure 1.4: Structure of the PERECC Report.



1.8 Conclusion, Key message and Recommendations

51. The PERECC is no doubt a useful tool for advocacy in building the visibility and relevance of the sector to the various categories of stakeholders. It is an involving data and information gathering exercise, more so when it is made to cover the non-state actors that lack a data repository of their own.

52. **By implication, adequate resources must be provided whenever a comprehensive review is to be conducted.** Its findings cannot throw light on all the issues in the ENR sector and other sectors. Complementary evidence must be produced by commissioning parallel studies. The requirement for conferring national ownership and sector engagement in design of the ToR for PERECC was commendable. As mentioned, the public expenditure review calls for sector specialists to be trained in public financial management literacy so that they objectively engage MINECOFIN in the entire budget cycle, including its review.

Message 1: Sector specialists, planners and policy makers should keep track of improvements in data disaggregation by their sources to make similar reviews and for their decision making and planning, and should make national ownership mandatory to the public expenditure reviews processes.

53. **It is therefore recommended that:**

- (i) Analysis, conclusions and recommendations from PERECC should always be limited to the specific sources of data and information that can be independently and objectively verified to enhance **credibility**.
- (ii) Parallel advocacy tools like stand-alone economic analytical studies, **Beneficiary Impact Assessment, Citizen Report Card and Community Score Card, Public Expenditure Tracking Surveys [PETS] among others**, should be commissioned to enrich the understanding of PERECC findings.
- (iii) To the extent possible, the next review should be commissioned after other surveys have been made e.g. EICV 4 so that it becomes cost-effective to tap into other data sources to enrich the evidence.
- (iv) MINECOFIN should design a user friendly training manual in public financial management systems for non-financial managers and use it to train sector specialists to engage the budget process from an informed position.

2: DEFINING THE BOUNDARY FOR PERECC IN RWANDA, 2008-2012

2.1 Introduction

54. **As a principle, the review started off by bridging the gap between the understanding of environment and climate change within Rwanda's legal and policy framework with that used in other countries for similar reviews.** According to Organic Law No. 4/ 2005 of Rwanda, the term environment is defined thus:

“Environment is a diversity of things made up of natural and artificial environment. It includes chemical substances, biodiversity, as well as socio-economic activities, cultural, aesthetic and scientific factors likely to have direct or indirect, immediate or long term effects on the development of an area, biodiversity and on human activities.”

55. The above law goes a step further to list specific examples by the type of environment as summarized in Table 2.1.

Table 2.1: Example of categories of environment according to Organic Law No 4/2005

Category of environment	Specific examples
A: The Natural Environment	i) Soil ii) Water iii) Air iv) Biodiversity v) Landscape ¹⁵ vi) Site vii) Natural monument
B: Human environment B:1: Those that are destructive B:2: Those that are not destructive	i) Pollutants ii) Waste iii) Hazardous waste iv) Installation v) Pollution Activities that enrich or reduce adverse effects of the environment e.g. afforestation, technologies, etc

Source: Organic Law No. 4/2005

2.2 Expenditure for environment and natural resources

56. **Globally, the aspects that countries have generally included in the review under environment protection and natural resources are given in Table 2.2.** On the other hand, Table 2.3 gives what constitutes environmental protection according to the Classification of functions of government [COFOG] which countries use to classify and compare government functions according to International Monetary Fund [IMF].

¹⁵ This includes mountains, forests, plain lands, valleys, swamps and lakes

Table 2.2: Classification of environmental activities (CEA)

Environmental Protection	Resource Management
1. Protection of ambient and climate	1) Management of mineral and energy resources
2. Wastewater management	2) Management of timber resources
3. Waste management	3) Management of aquatic resources
4. Protection and remediation of soil, groundwater and surface water	4) Management of other biological resources (excl. timber and aquatic resources)
5. Noise and vibration abatement (excluding workplace protection)	5) Management of water resources
6. Protection of biodiversity and landscapes	6) Research and development activities for resource management
7. Protection against radiation (excluding external safety)	7) Other resource management activities
8. Research and development for environmental protection	
9. Other environmental protection activities	

Source: IMF [2001] *Government Financial Statistics Manual 2001*

Table 2.3: Environmental protection functions according to COFOG

Environment protection (COFOG) and environment promotion	Description of function
1. Waste management (COFOG 05.1)	Collection, treatment and disposal of waste
2. Waste water management (COFOG 05.2)	Sewage system operation and waste water treatment
3. Pollution abatement (COFOG 05.3)	Activities relating to ambient air and climate protection, soil and groundwater protection, noise and vibration abatement and protection against radiation.
4. Protection of biodiversity and landscape (COFOG 05.4)	Activities relating to the protection of fauna and flora species, the protection of habitats (including the management of natural parks and reserves) and the protection of landscapes for their aesthetic values.
5. Research and development (COFOG 05.5)	Administration of applied research and experimental development on subjects related to environment protection; operation of government agencies engaged in applied research and experimental development on subjects related to environment protection; support in the form of grants and loans for applied research and experimental development on subjects related to the environment protection undertaken by non-governmental bodies such as research institutes and universities.
6. Environment protection affairs and services	Administration management, regulation, supervision, operation and support of activities such as formulation, administration, coordination and monitoring of overall policies, plans, programmes and budgets for the promotion
7. Environment promotion activities	Activities which promote sustainable use of natural resources and which prevent or mitigate the negative environmental externalities of non-environmental development projects that potentially deplete natural resources or generate pollution. Examples would include investments in renewable sources of energy, or in sustainable agricultural technologies.

Source: IMF [2001]: *Government Financial Statistics Manual, 2001*

57. Generally, there is a convergence between Rwanda and global practice mainly because countries follow similar functional classification of government for budgeting which includes environment. However, some countries go beyond this scope just as Rwanda has done for this review implying that any inter country comparison has to give caveats.

58. With the above understanding, the traditional PEER has been defined thus¹⁶:

“Expenditure by public institutions for purposeful activities aimed directly at the prevention, reduction and elimination of pollution or any other degradation of the environment resulting from human activity, as well as natural resource management activities not aimed at resource exploitation or production” [Auphil Swanson and Leiv Lunderthors, 2003]

59. **A particular boundary issue concerns the treatment of activities associated with production of energy from renewable sources and the treatment of activities with energy savings.** Often that depends on the choice of the country, but taking into account whether it is for environmental protection, for resource management, or for the general production of energy. In this review, only activities for renewable energy, energy substitution and energy at community level funded through RLDSF were included. The same is true in agriculture. Use of chemical fertilizers in agriculture for example contributes to the Economic Affairs of COFOG but could also have negative impacts to the environment. Owing to the fact that there is no universally accepted boundary for environmental expenditure, countries have practically defined their own scope of what such reviews should cover. Rwanda is no exception. Importantly however, any review must be superimposed on the government’s chart of accounts which reflects the titles of relevant programmes and sub-programmes and budget codes.

2.3 Expenditures for climate change

60. **It is observable from Tables 2.2 and 2.3 that some of the activities for environmental protection and natural resource management are also good for climate change expenditure.** For example, afforestation on watershed is good for environmental protection [erosion control]; equally good for natural resource management to provide energy for the poor; equally good for acting as sink for carbon sequestration [climate change]; just as it is good for combating desertification. The list can go on. Rwanda’s priority is for adaptation measures under its second Climate Change Communication to UNFCCC with following interventions:

- (i) Strengthening a friendly, political, legislative and institutional framework in the management and protection of water resources
- (ii) Sustainable management of water resources
- (iii) Establishing an emergency plan to fight against drought
- (iv) Water conservation
- (v) Integrated watershed management
- (vi) International, regional and sub-regional cooperation
- (vii) Research and monitoring

¹⁶ According to the World Bank

61. The above notwithstanding, Rwanda has further shown the following actions relevant to climate change across its sectors shown in Table 2.4.

Table 2.4: Sectors involved in the Programmes of Action

Programme of Action	Agriculture	Water	Land	Built Environment	Transport	Forestry	Mining	Energy	Industry	Health	Education	Local government	Disaster Management
1. Sustainable intensification of small scale farming	✓	✓	✓			✓					✓	✓	✓
2. Agricultural diversity for local and export markets	✓	✓	✓		✓			✓	✓		✓		
3. Integrated Water Resource Management and Planning	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
4. Sustainable Land Use Management and Planning	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
5. Low carbon mix of power and generation for national grid		✓	✓	✓	✓		✓	✓	✓	✓	✓		✓
6. Sustainable small-scale energy installations in rural areas	✓	✓	✓	✓		✓		✓		✓	✓	✓	✓
7. Green industry and private sector investment	✓	✓	✓	✓	✓		✓	✓	✓		✓		
8. Climate compatible mining		✓	✓		✓		✓	✓	✓		✓	✓	✓
9. Efficient resilient transport systems	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	
10. Low carbon urban settlements		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓
11. Ecotourism, conservation and PES promotion	✓	✓	✓			✓		✓	✓	✓	✓	✓	✓
12. Sustainable forestry, agro forestry and biomass energy	✓	✓	✓			✓		✓	✓	✓	✓	✓	✓
13. Disaster management and disease prevention	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14. Climate data and projections	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Source: National Strategy on climate change and Low Carbon Development page 21

62. To note is that some activities like mining in the above table also fall under industry and commerce under COFOG, while those of agriculture fall under economic affairs of COFOG. The choice for Rwanda to have them reviewed under this report was respected. That had bearing on the choice of comparisons that could be made with other countries.

2.4 Conclusion, Key message and Recommendations

63. A review covering environment, natural resources, climate change as well as their cross-sectoral nature in public and private institutions is very broad, challenging and evolving across countries. But it is relevant and can be made quite interesting provided the structuring of budget items is directly superimposed on the planned activities. Secondly, it is dictated by both financial and human capacities. It is for this reason that some countries prioritize themes for their review. For example, Namibia's review by World Bank covered only Ministry of Environment and Tourism [2008]; Nepal's covered only Climate Change [2011] while Romania covered environment, water

and forestry [2011], and Kenya's covered forestry [2008]. The choice of the boundary therefore depends on the country's priorities.

64. The themes for the review could be arrived at in a consultative manner through the sector working group in Rwanda in future, considering that some aspects could be covered under Joint Sector Reviews or commissioned studies.

Message 2: The boundary for PERECC is always a country's choice and it should be respected but to the extent possible, it should take cognizance of the human capacities, financial resource and data availability.

65. It is recommended that in future, the sector working group should assess the availability and adequacy of financial resources and data sets on which the review could build upon to expedite the analysis and to produce evidence in a cost effective manner, and in any case they should align the ToR for the review with the public financial management systems used over the period for the review.

3: FINDINGS FROM THE CONTEXT OF PERECC IN RWANDA, 2008-2012

3.1 Legal, policy and institutional framework for environment and climate change

66. **No doubt Rwanda has made strides in putting in place policies and laws for environment and climate change particularly after 2005 as seen in Table 3.1.** Likewise, it has made several strategies to operationalize the policies for implementation and to create public awareness. According to EICV 3, as high as 96.7% of Rwanda households accessed information on environmental issues mainly through meetings [56.9%] and radio [40.7%]. It thus became of particular interest to assess the extent to which the awareness was being translated into sustainable investments and changing of mindsets.
67. **Two features in Table 3.1 are that Rwanda does not yet have a policy framework for Climate Change in its own right¹⁷ and most sectoral strategies are coming to an end.** That presents it an opportunity to align the forthcoming ones with EDPRS 2 and to feature climate proofing strategies very strongly.
68. **At sectoral level, the ToR called for a review covering all expenditure for the Ministry of Natural Resources (MINIRENA) among others.** It has the mission to ensure protection and conservation of the environment and ensure optimal and rational utilization of natural resources for sustainable development. It also has the responsibility to mobilize resources for the development of the sector and related programs by ensuring a coordinated approach. Under it are two semi-autonomous government agencies [SAGAs] namely REMA and RNRA which have been reviewed under Chapter 7. It has to be understood that the sub-sectors or units under MINIRENA have evolved over time with some being shifted to other ministries. That evolution during the period 2008-2012 covered by the review expenditure is given in Table 3.2. The analysis of MINIRENA took that into account in Chapter 4 because it involves shifting of programmes and sub-programmes. To note and as highlighted in the ToR is that in May 2008, the Ministry of Environment and Lands [MINELA] was merged with the Ministry of Forests and Mines [MINIFOM] to form the Ministry of Natural Resources [MINIRENA].
69. **Furthermore, the GoR has taken a two-pronged approach of taking environment and natural resources as a sector in its own right under MINIRENA and as a cross-cutting issue in the development process across all sectors.** In addition, some of the key services like meteorology are placed under MININFRA; standards including environmental standards under MINICOM; renewable energy and energy substitution under MININFRA; disaster preparedness under the recently formed MIDIMAR. These aspects are budgeted for as programmes or sub-programmes under their respective budget agencies.
70. **The GoR has been implementing a decentralization policy, overseen by MINALOC.** Under this ministry, the government established the Common Development Fund [CDF] in 2002 under Law No. 20/2002 as a financial intermediary for the implementation of the decentralization policy. However, in 2010 the government established Rwanda Local Development Support Fund (RLDSF) under Law No. 41/2010 which merged with CDF. Expenditure to districts through RLDSF has mainly been reviewed under chapter 5 on fiscal decentralization.

¹⁷ Countries known to have made such policies include Uganda but it is not yet approved.

Table 3.1: Main policy, legal and institutional landscape for environment, natural resources and climate change

Sub-sector	Policy	Legislation	Strategic plan	Key implementing agencies
1. Environment	National environmental policy	Organic Law N°. 4/.2005	- 5 year Strategic Plan for the ENR sector, 2009-2013 -Environment sub-sector strategic plan 2010-2015	MINIRENA, REMA
2. Climate change			National Strategy for Climate Change and Low Carbon Development, 2011	MINIRENA, REMA
3. Environment and climate change financing		Organic Law No.4/2005 and Law No16/2012		FONERWA
4. Land	Land Policy 2003	Organic Law N°. 8/2005	Land sub-sector strategic plan 2009/10-2013/14	MINIRENA, RNRA
5. Integrated water resources	National policy for water resources management 2011	Law No 62/2008	Water Resources Management sub-sector Strategic Plan 2011-2015	MINIRENA
6. Forests	Forestry policy [Draft]	Forest law N° 47/88 of 05/12/1988	Strategic Plan for the Forest Sector 2009-2012	MINIRENA, RNRA
7. Mining	Mining and Geology Sector Policy	Law No.37/2008	Strategic Plan for Rwanda Geology and Mining 2010-2013	MINIRENA, RNRA
8. Water and sanitation	National Policy and Strategy for water supply and sanitation services, 2010	Water Act	Part of policy	MININFRA, RURA
9. Energy	National Energy Policy	Law No 18/1999	National Energy Strategy 2008-2012	MININFRA, RURA,
10. Wildlife	Wildlife Policy	Organic Law N°. 04/ 2005		MINICOM, RDB,
11. Biodiversity	Biodiversity Policy	Presidential Decree N°. 30/01 August, 2004,	National Strategy and Action Plan for conservation of Biodiversity 2003	RDB
12. Disaster preparedness			A national policy on disaster risk reduction and prevention 2002	MIDIMAR

Table 3.2: Evolution of sub-sectors for ENR sector under Ministries, 2008-2012

Year	2008	2009 Mini	2009/10	2010/11	2011/12
Ministry	MINITERE	MINIRENA	MINELA/ MINIFOM	MINELA/ MINIFOM	MINIRENA
Sub-sectors					
1. Environment and climate change	✓	✓	✓	✓	✓
2. Water and Sanitation ¹⁸	✓				
3. Integrated Water Resources ¹⁹		✓	✓	✓	✓
4. Land	✓	✓	✓	✓	✓
5. Forestry	✓	✓	✓	✓	✓
6. Mining	✓	✓	✓	✓	✓
7. Administration and Institutional development	✓	✓	✓	✓	✓

71. **In terms of financing, RLDSF is expected to receive at least 10% of domestic revenues from the state, based on the budget for the previous year.** Suffice it to mention below some of the key responsibilities of RLDSF. They include:
- (i) Supporting development activities in local administrative entities.
 - (ii) Serving as an intermediary between the local administration entities and donors
 - (iii) Putting in place mechanisms for distributing financial support to local administrative entities
72. **In terms of structures, Rwanda has three main levels of government: central government, 4 provinces plus Kigali City, and 30 districts [akarere].** Below districts are two additional administrative levels: 416 secteurs [*imirenge*] and 2150 cells [*imidugudu*]. The central government Ministries supervise the semi-autonomous government agencies [SAGAs]. It is the Ministry of Local Government [MINELOC] that supervises provinces and districts. Provinces are mainly coordination bodies while districts are the main recipients of government transfers.
73. **Districts are composed of both the political and technical organs.** The former is an elected Council, which acts as the legislative body at the district and adopts the district budget. It is headed by an elected Mayor and Vice-mayors. The technical organs are headed by the Executive Secretary. While MINALOC supervises districts, other ministries provide oversight and mentor districts to carry out specialized functions. MINECOFIN mobilizes and manages external and internal resources for the country, and monitors and evaluates the implementation of sector and sub-sector policies, strategies and programmes.

¹⁸ After 2008, the sub-sector was transferred to MININFRA

¹⁹ Integrated Water Resources was included after 2008

74. **All public institutions and ministries work closely with the Private Sector Federation [PSF] and its members, international and national non- governmental organizations[NGOs] and community based organizations[CBOs].**The extent to which these have also spent for environment has been an area of interest in the review as per ToR.

3.2 Baseline environmental and climate change issues and proposed priorities.

75. **Environment and Natural Resources Sector Strategies Plan [2008-2012] prioritized lack of land, poor and unproductive soils and drought as the main underlying causes of poverty in Rwanda.** Subsequently, its enumerated 8 priority areas of intervention for implementation under EDPRS 1 lifespan, namely:

- (i) Sustainable land management
- (ii) Sustainable integrated water resources management
- (iii) Sustainable management of forests and biomass resources
- (iv) Ecosystem conservation and improved functioning
- (v) Sustainable mining and mineral exploitation
- (vi) Environmental sustainability of policies, programmes and projects at national and local level.
- (vii) Policy, legal and regulatory framework for environmental management
- (viii) Institutional capacity of ENR governance

76. **In 2010, MINIRENA updated the above plan and made another one that included a strategic objective” to ensure that Rwanda is protected from the effects of Climate Change by putting in place and implementing appropriate mechanisms for mitigation and adaptation through mobilization of and collaboration with stakeholders”.** Besides, the key interventions for climate change in the country have been highlighted in section 2.3. In addition, out of its NAPA of 2006, Rwanda had prioritized the following interventions, namely:

- (i) Integrated water resource management
- (ii) Setting up information system of hydro agrometerologic early warning system and rapid implementation.
- (iii) Promotion of intensive agricultural and animal husbandry
- (iv) Introduction of varieties resistant to environmental conditions
- (v) Development of energy sources, and alternative to firewood

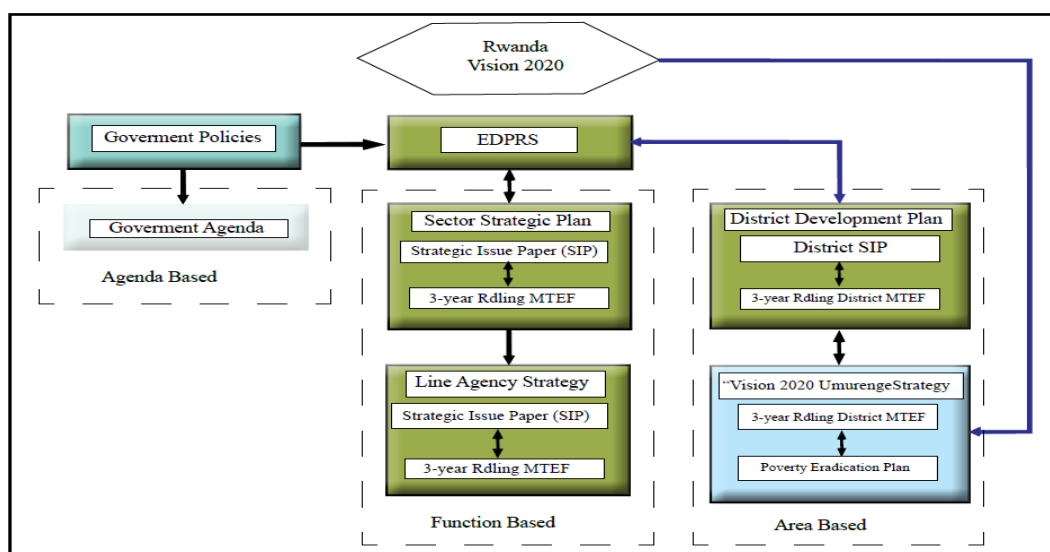
77. Logically, the above issues formed the benchmark for analysis of expenditure for environment and climate change, 2008-2012 in this report.

78. **The analysis went a step further to assess the key challenges that the 2007 MDG report highlighted under Goal 7 for ensuring environmental sustainability.** They included (i) rapidly growing population density, (ii) land degradation which affects agricultural productivity, (iii) deforestation,(iv) rural-urban migration putting stress on social and physical infrastructure,(v) lack of environmental related data and (vi) weakness in implementing the environmental strategy due to inadequate resources.

3.3 Framework of linking sectoral plans to EDPRS and the budget.

79. **Figure 3.1 presents the practice of linking macro-policies and local area plans to the financing instruments, particularly the Medium Term Expenditure Framework (MTEF) under EDPRS 1.** EDPRS 1 is a medium-term strategy aimed at putting Rwanda on the path to meeting the MDGs and Vision 2020 targets. It had three flagship themes, namely (i) sustainable growth for jobs and exports (ii) Vision 2020 *Umurenge* and (iii) good governance. Vision 2020 envisages Rwanda as a middle income economy with a healthier and better educated population, life expectancy increased to 55 by 2020; full literacy and per capita income of US\$ 900 by 2020. Sectoral and district plans were expected to give effect to Vision 2020 and EDPRS implementation.
80. **On the other hand, the flagship of Vision 2020 *Umurenge* addresses extreme poverty and vulnerability in the rural areas.** It has three components, namely (i) public works aimed at creating off-farm employment and building community assets, (ii) encourage development of cooperatives and small and medium enterprises [SMEs] with access to credit to foster entrepreneurship and (iii) provision of social services and assistance to the landless families that are unable to participate and earn from public works programmes.

Figure 3.1: Policy, legal and planning frameworks and their relationships in Rwanda



Source: EDPRS 2008-2012

81. **Following finalization and approval of EDPRS 2, MINECOFIN has gone a step further to align its budget to EDPRS 2 priorities in Annex 11-9 of the Budget Law 2012/2013.** In the same vein, it should guide sectors and districts to follow suit. It became necessary to establish the extent to which the lessons from EDPRS 1 implementation informed the proposed budgets for EDPRS 2 implementation. The main ones have been discussed in chapter 9.
82. **EDPRS 2 has been structured into four thematic priorities of economic transformation, rural development, productivity and youth employment and accountable governance.** They are collectively strengthened by foundational issues and cross-cutting issues, of which environmental and climate change issues and those of disaster management are a part of cross-cutting issues.

83. Over-arching goal of EDPRS 2 is accelerating progress to middle income status and better quality life for all Rwandans through sustained growth of 11.5% and accelerated reduction of poverty to less than 30% of the population by 2018.

3.4 District practices of planning and budgeting for environment and climate change

84. **In conformity with 'subsidiarity principle', implementation of environment and climate change interventions should be done by institutions close to the ground.** Districts therefore are expected to translate ministerial policy statements into investments that help the poor. A review of sample District Development Plans from 5 districts of Kicukiro, Nyamagabe, Kayanza, Huye and Burera has revealed the following;
- (i) staff did very well to make situational analysis of environmental problems, and to recommend interventions, with indicators, and budgets.
 - (ii) the alignment of plans to EDPRS was more than average
 - (iii) all plans were weak on climate risk assessment and any intervention that they proposed were incidental to addressing environmental problems
85. **Districts would start to make plans compliant to EDPRS 2 and to climate proof the planning process if their capacities are built.** Table 3.3 provides the key challenges districts face in environmental planning against which the author has indicated possible areas for their support. Unless capacities are developed at that level, many policy provisions will not be implemented at grass root level. The lack of capacity at districts has also been echoed by other people. According to the Embassy of the Kingdom of Netherlands in Kigali, high level officials in Rwanda are well educated, but at lower levels there is a huge shortage of skills necessitating the government to put in place a Public Sector Capacity Building Secretariat.
86. **Based on Table 3.3, GoR would do justice to the sector by soliciting for funds for a capacity building programme for environmental management and climate change adaption to benefit not only the public institutions but also the private firms, NGOs, CBOs and communities.** It was an oversight to market the concept of environmental mainstreaming before a critical mass of staff was trained and skilled in the above fields. Based on the back of envelope calculation a programme that spans across institutions and for at least 5 years before its evaluation would not fall below US\$ 10 million.

Table 3.3: Environmental and climate change problems across districts and potential solutions

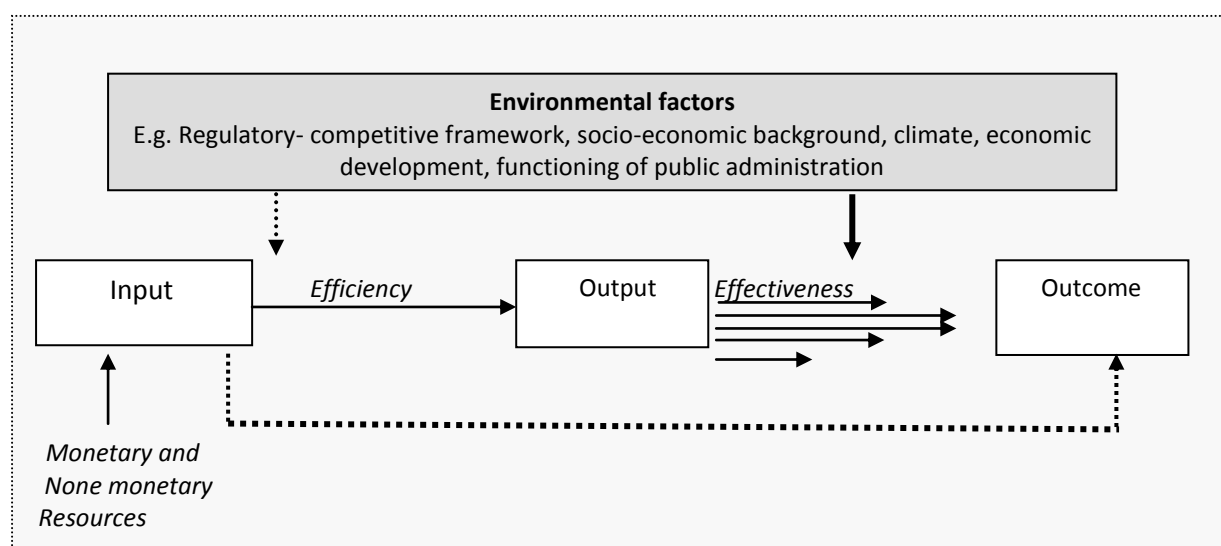
List of major environmental and climate change issue by reporting districts	Recommendations
1. Insufficient local revenue and /or budgets, or budget remaining constant over years or no budget line at all [<i>Gakenke, Gasabo, Gatsibo, Huye, Kamonyi, Muhanga, Musanze, Ngororero, Nyabihu, Nyagatare, Nyamagabe, Nyaruguru, Rubavu, Ruhango, Rusizi, Rutsiro, Rwamagana</i>]	1. MINECOFIN should increase budget support to districts as it works with MINALOC to guide them in uniform revenue raising strategies, including from ENR. 2. Districts should build public private- partnership in addressing some of the environmental problems through formal MoUs
2. Only forestry receives earmarked fund, and even then not from MINIRENA but from other sectors or donors and the mentality exists that environment only means tree planting. [<i>Bugesera, Gatsibo, Kayonza, Kirehe, Ngoma, Nyabihu, Ngororero, Rulindo</i>]	1. MINECOFIN should broaden the 'Environmental Protection' functional classification to signal priorities within and across sectors and should increase the amount of earmarked funds covering more than forests, preferably using the broadened chart of accounts.
3. Low awareness and skills for environmental management and to address Climate Change issues [<i>Gatsibo, Gicumbi, Gisagara, Karongi, Kamonyi, Karongi, Muhanga, Musanze, Ngoma, Nyabihu, Nyagatare, Nyaruguru, Rubavu, Ruhango, Rusizi, Rutsiro</i>]	1. ENR Sector Working Group should develop and fund a communication awareness strategy using multiple channels pertinent to audiences 2. MINIRENA should develop a capacity building programme for environmental management.
4. Poor mindset or taking environment as gift from God, or not realising direct tangible benefits from protecting the environment [<i>Bugesera, Huye, Kayonza, Ngoma, Musanze, Rwamagana</i>]	1. Government should balance quick gain demonstration projects with those for "public goods" benefits to rally participation of many stakeholders.
5. Low involvement of the private sector, NGOs, CBOs in addressing environmental and climate change issues, [<i>Bugesera, Gicumbi, Gisagara, Kamonyi, Karongi, Ngoma, Nyabihu, Rutsiro, Rulindo</i>]	1. Districts should build upon the active private firms, NGOs, CBOs they listed in Annex 6 and new ones to partner with in implementing ENR activities through formal MOUs with clearly agreed upon roles, targets and budgets.
6. Lack of data and information base on environmental issues and opportunities to influence planning and budgeting rationally, systematically and consistently [<i>Gasabo, Gisagara, Nyamagabe, Nyaruguru, Rubavu, Rutsiro</i>]	1. MINALOC in collaboration with MINIRENA, REMA, and RNRA should commission District Environmental Resource Profiles that capture the resource base, the problems faced, the opportunities and translate them into a well costed long term sustainability plan.
7. Poor involvement of planners in issues of environment and Climate Change or low mobilization by local authorities [<i>Bugesera, Kamonyi, Kirehe, Muhanga</i>]	1. Mayors and Executive Secretaries should involve planners and local leaders in identifying and budgeting for ENR and climate change issues by forming district environmental committees.
8. ENR not considered priority by the districts [<i>Gasabo, Gatsibo, Kicukiro, Ngororero, Nyaruguru, Rwamagana, Muhanga</i>]	1. As in 2 above.
9. Disasters reverse actions to protect the environment, or high maintenance budgets are needed or the resources available are outweighed by the rate of degradation [<i>Gicumbi, Rusizi, Rulindo</i>]	1. MINIRENA should support districts in costing environmental activities 2. FONERWA should create a financing window for environmental and climate change disasters.
10. ENR is considered as cross cutting and marginised [<i>Kayonza, Nyamagabe</i>]	1. As in 2 above.
10. Lack of transport [<i>Gakenke</i>]	1. Departments should cost-share the available transport
11. Industries constructed in wetlands/encroachment in wetlands/ poor sewage systems that leak, and waste management only for those who can afford. [<i>Kicukiro</i>]	1. Kigali City should improve urban planning by gazetting land for different purposes e.g industry, settlement, public transport, recreation, conservation, without forgetting to gazette and protect critical wetlands from encroachment
12. Climate change issues are seasonable and difficult to plan and budget for [<i>Rusizi</i>]	1. As in 9 above. 2. FONERWA should partner with institutions to popularize climate change risks. 3. MINAGRI should upscale weather indexed insurance for agriculture.

3.5 Relationship between PERECC and public financial management systems

87. The review was done in the context of Rwanda's efforts to improve public expenditure management (PEM) in general and to reflect its foreign aid on national budget. PEM literature identifies a few essential goals of any sound public expenditure management system. It also identifies a set of universally applicable necessary conditions to achieve these goals. Together they establish a general framework for the sound public finance. Their applications to environmental sector give rise to good practices in Public Environmental Expenditure Management (PEEM). Main goals of sound Public Expenditure Management (PEM) systems are fiscal discipline, allocative efficiency and cost effectiveness as shown in Figure 3.2 and explained below.

- **Fiscal discipline** means control of total government expenditure, including central and local government budgets, state-owned enterprises and extra-budgetary funds. Absence of constraints is likely to result in large, unsustainable deficits and an unstable macroeconomic environment. Fiscal discipline requires ceilings imposed on total public sector expenditure and on sectoral financial envelopes. Special care is required to control multi-year, explicit legal commitments, such as debt-servicing as well as implicit or contingent liabilities (e.g. guarantees). MINECOFIN sets the limits of public expenditure in the budget framework papers ahead of reading the annual budget.
- **Allocative efficiency** means ensuring the best outcome by prioritising competing claims for different social objectives on scarce public funds (within aggregate fiscal discipline). Difficult choices must be made between the social benefits of various objectives in education, health service or environment. Ultimately the outcome is achieved through political **bargaining and lobbying**, ideally supported by adequate information provided to all parties about trade-offs that are being made. The ENR sector must therefore continually make a case for additional budgets, with clear compelling evidence. For example, unless households are supported to shift from biomass energy for cooking to alternatives like biogas, the GoR would continue to spend highly under health to treat Acquired Respiratory Infections (ARIs) caused by indoor pollution, among others.
- **Cost effectiveness** implies achieving objectives at minimum cost.

Figure 3.2: Conceptual framework for efficiency and effectiveness



Source: PEER Manual, Rwanda 2009

88. To simplify Figure 3.2 further, the following table provides definitions and formulae for economy, efficiency and effectiveness.

Table 3.4: Defining economy, efficiency and effectiveness of expenditure

Criteria	Definition	Formula
(i) Economy	Competitive procurement of inputs needed to provide a good or service	Input/total resources
(ii) Efficiency	Providing output of the required quality at the minimum cost	Output/input
(iii) Effectiveness	Achieving target outcome for the least overall cost	Outcome/cost

89. Three necessary conditions for achieving PEM goals are transparency, accountability and comprehensive of the budget. Rwanda's 2023/2014 budget is for example more detailed and comprehensive compared to that of 2008. That is a positive trend.
90. Periodically, the GoR reviews its public financial management performance with its development partners in accordance with the Paris Declaration of Aid Effectiveness. Table 3.5 which presents some of the aspects chosen under this review point to the conclusion that there has been a lot of progress, although some of the aspects need further improvement, so that all areas get a score of "A". The fact that the proportionality of aid managed by the use of national government systems scored only a "D" creates a limitation in carrying out PERECC in short time. Likewise, the fact that availability of information on resources used by service delivery units is scarce is an indication that government should periodically carry out Public Expenditure Tracking Surveys (PETS).

Table 3.5: Trends in Public Financial Management Performance 2007-2010

Aspect Reviewed	2007	2010
1. Comprehensiveness of information included in budget documentation	D	A
2. Aggregated expenditure outturn compared to original approved budget	B	A
3. Competition, value for money and controls in procurement	D	A
4. Predictability of Direct Budget Support	B+	A
5. Predictability in the availability of funds for commitment of expenditure	B+	A
6. Orderliness and participation in annual budget process	B+	B+
7. Proportion of aid that is managed by use of national procedures	D	D
8. Availability of information on resources received by service delivery units	D	D

Source: MINECOFIN [2010] Public Financial Management Performance Report

91. **Despite the improvements in public financial management, there are some practices which complicate getting all the expenditure for environment and climate change in a single repository of government.** The key ones are that:
- (i) A considerable proportion of aid (57%) remains outside country systems as it is not delivered in form of general and sector budget support.
 - (ii) Actual expenditure of donor-funded projects is not being captured in fiscal reports.

3.6 The role of stakeholders in budget cycle

92. **Ideally, the role of stakeholders in state and non-state institutions should start right from the budget formulation stage to monitoring and evaluation.** Rwanda's budgeting cycle is comprehensive and elaborate. Multi-stakeholders involvement enhances transparency and accountability, besides contributing to how trade-offs and, cost-savings can be made.
93. Periodically, an Open Budget Survey is made to assess whether the central government in each country makes eight documents available to the public, as well as whether the data contained in them is comprehensive, timely and useful. Rwanda participated in such a survey in 2012 in which 100 other countries participated. The survey uses internationally acceptable criteria developed by multilateral organization such as IMF, OECD and the International Organization of Supreme Audit Institutions.
94. Overall, Rwanda was found to have an average budget oversight in East Africa [Table 3.6]. But out of a score of 100, it increased from 1 to 11 in 2010 but dropped to 8 in 2012. In 2012, Uganda led with 65, followed by Kenya (49) and Tanzania (47). As the development partners support the government, they should equally build the capacity of credible and active CSOs to demand for accountability and services delivery. In that way, many stakeholders will engage the budget process.

Table 3.6: Rwanda's status on budget oversight and stakeholder participation

Country	Legislative	Strength of supreme audit institutions	Public engagement
Kenya	Moderate	Strong	Moderate
Rwanda	Strong	Strong	Weak
Tanzania	Moderate	Strong	Weak
Uganda	Strong	Strong	Weak

Source: [www.internationalbudget.org].

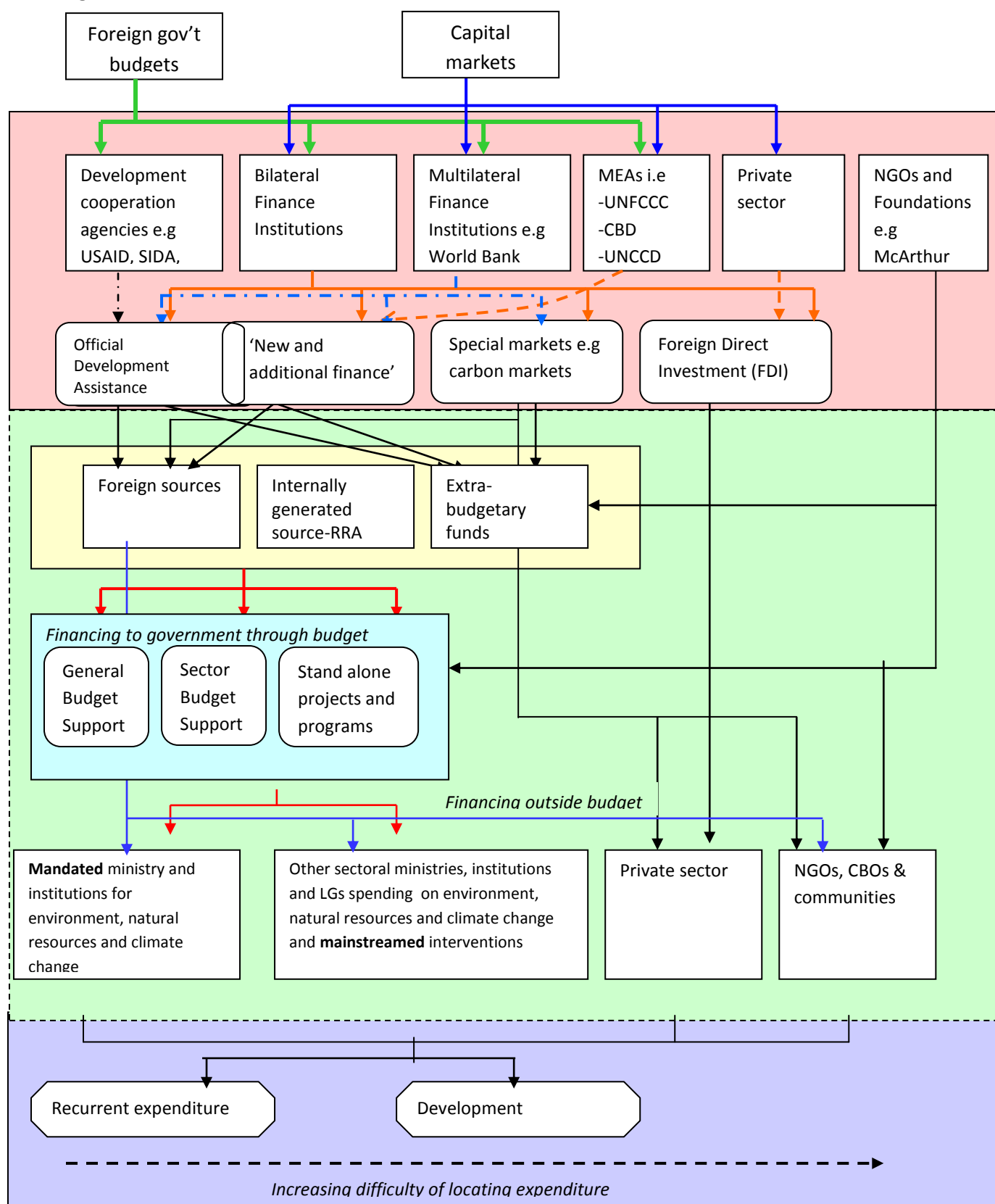
3.7 Sources, types and flows of resources to environment and climate change

95. **Locating and tracking financing and expenditure for environment land, climate change is very complex, and it would be too optimistic to think that the situation will change both in the short-run and medium term.** Figure 3.3 presents that complex architecture, whereby some of these sources overlap or become channeled through other agencies that ultimately support Rwanda on budget or off-budget.

96. It is for this reason that it became necessary to locate the most important sources of data and information in that Figure 3.3 so as to practically and plausibly establish the trends, patterns and analysis for environmental and climate change expenditure which can inform policy analysis, including strategies for improving public financial management systems and databases. Equally important, the ENR sector in Rwanda is advised to keep track of changes in different data repositories mentioned in this report, and to provide caveats for one's interpretation and policy guidance.
97. **The financing windows and instruments under the auspices of UNFCCC are many more than what Figure 3.3 can possibly accommodate.** Nonetheless the main message is that the capacity of MINECOFIN and FONERWA should be built to identify climate change financing opportunities that can benefit a wide range of stake holders in Rwanda. As a matter of fact, the International NAMA Facility announced the launch of its first call for NAMA support during the time of the review. The Facility was jointly established by the German Federal Ministry of Environment, Nature Conservation and Nuclear Safety and UK Department of Energy and Climate Change (DECC) to support developing countries that show leadership on tracking climate change and want to transform country-led NAMAs within the existing global mitigation architecture in the short term²⁰.

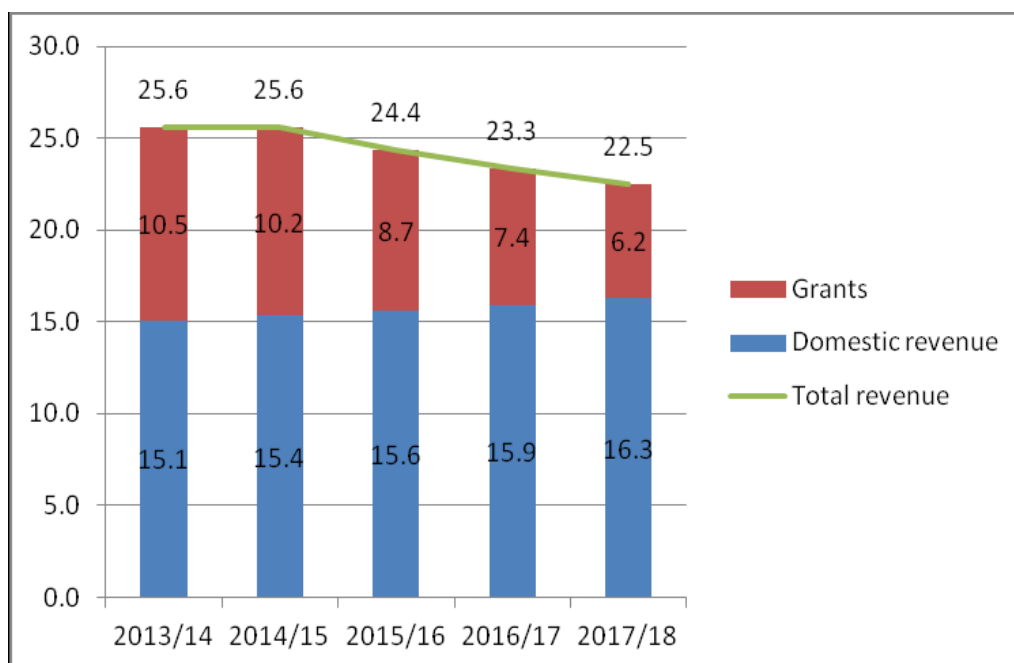
²⁰ The deadline for submission was 2nd September, 2013.

Figure 3.3: Sources and flows of funds and expenditure for environment, natural resources and climate change to Rwanda, 2008-2012



98. It was of particular importance to review the revenue position and how it can be enhanced especially among local government entities given that it is projected under EDPRS 2, that as a percentage of GDP, it is likely to fall from 25.6% in 2013/14 to 22.5% in 2017/18²¹. This is mainly on account of projected decline in the flow of grants [Figure 3.4]

Figure 3.4: Projected Government Revenues as Percentage of GDP under EDPRS 2



Source: EDPRS 2

99. As Figure 3.3 shows, some of the ODA is combined with locally raised revenue by Rwanda Revenue Authority to enable MINECOFIN prepare its budget annually. However, some of ODA is not put on budget but is spent through sectors projects, and through Rwanda Local Development Support Fund (RLDSF) to fund district interventions, and sometimes those of NGOs and CSOs.

3.8 Internally generated revenue through Rwanda Revenue Authority

100. Table 3.7 shows that the government's effort to raise revenue support expenditure across all sectors has been growing although it is not yet enough in relationship to the problems to address at hand. The challenge of the government is to equitably share that revenue recognizing that all sectors matter in creating the wealth for now and the future. According to the Budget Framework Paper covering 2013/14-2015/16 domestic tax revenue is projected to rise by 0.2% of GDP per year.

²¹ EDPRS 2, page 104

Table 3.7: Trends of internally generated revenue by RRA in Rwf. Billions, 2008-2012

	2008	2009	2010	2011 ²²	2012 ²³
Tax revenue	328.7	362.8	412.8	449.1	519.7
Non-tax revenue	52.3	16.5	18.1	22.1	26.2
Total	381.0	379.4	430.9	471.2	545.9

Source: BNR [2012] Financial Central Government Operations

101. The ability of the government to fund itself is often measured by the percentage of revenue to GDP. In Table 3.8 it is shown that in East Africa, Rwanda falls in the middle for 2012. With regard to Rwanda only, the gross investment as a percentage of GDP has dropped from 23.5% in 2008 to 22.8% in 2012²⁴

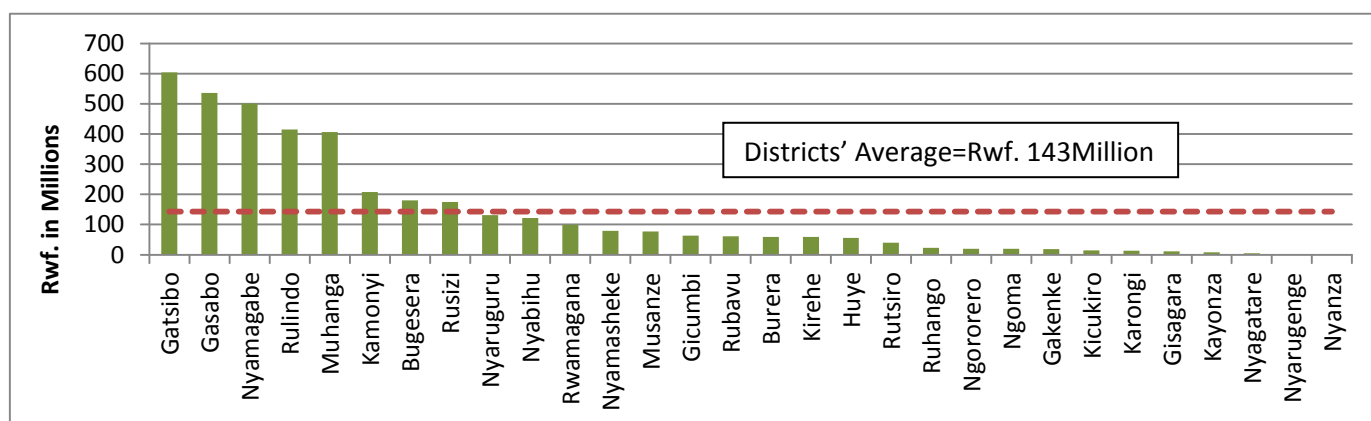
Table 3.8: Ranking of Rwanda's tax revenue as percent of GDP in East Africa

Country	Burundi	Kenya	Rwanda	Uganda	Tanzania
Tax revenue as % GDP	17.4	18.4	14.1	12.6	12.0

Source: Index of Economic Freedom, Heritage Foundation

3.9 Internal revenue from districts and proportionality from environment and natural resources

102. It was found among 28 districts that the share of ENR revenue to total internal revenue for the period 2008-2012 was 5.6%²⁵. The average across these districts was Rwf 143 million for five years as shown in Figure 3.5.

Figure 3.5: Districts ranking by their ENR revenues 2008-2012

Source: Based on Budget Tracking Tool summarized in Annex 4

²² Based on Laws determining g estimates for 2010/2011

²³ Based on Law determining estimates for 2011/2012

²⁴ EDPRS 2. Page 6

²⁵ Excluding Nyanza and Nyarugenge

103. Table 3.9 shows the leading revenue earners from ENR based on Annex 4, with some districts' share from ENR much higher than what has always been known. MINECOFIN has in the past estimated it to be between 5-20% as stated below:

"Districts generate only between 5-20% of their budgets. MINECOFIN is in the process of commissioning a revenue potential study for districts to determine the potential of districts after which baselines will be determined and targets set for revenue improvement. This should form the basis for supporting Local Governments to improve their internal revenue generation and management. It is anticipated that with effective tax administration, within the first year of implementing the LG tax law, local government revenues will increase from the present Rwf 16 billion to as much as Rwf 90 billion. [MINALOC 2012].

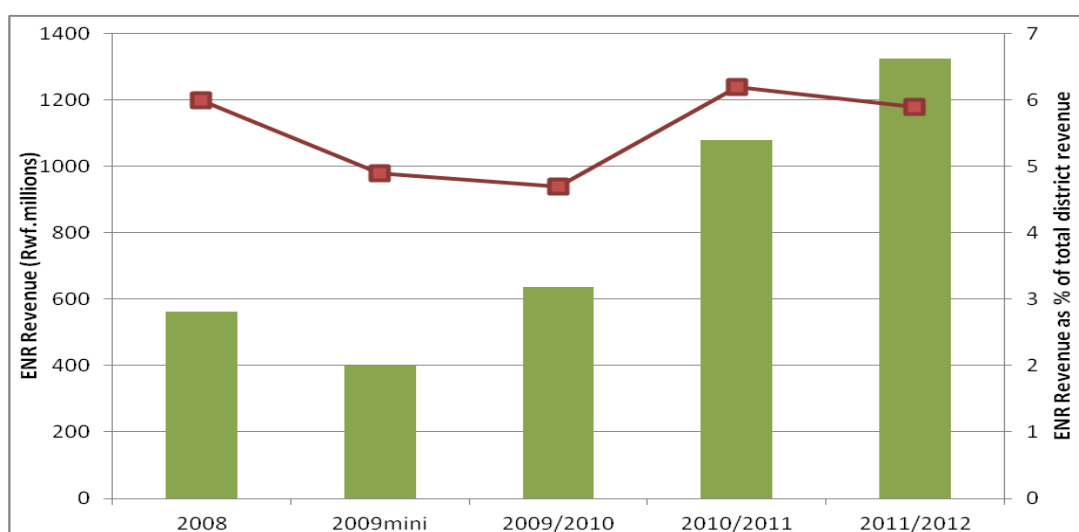
Table 3.9: The districts with highest percentages of ENR revenues and their sources

District	% of revenue from ENR	Main sources
1.Gatsibo	52.6%	Transport of woody products and public cleaning
2.Rulindo	37.9%	Hygiene cleaning, boundaries marking and brick yard fees
3.Nyamagebe	32.7%	Forest produce
4.Muhanga	25.0%	Land registration fees and public cleaning
5.Kamonyi	17.9%	Tax on property [land] and license fees to exploit subsoil

Source: Based on Budget Tracking Tool

104. Figure 3.6 depicts the trend of ENR revenues 2008-2012 from districts based on only a maximum of 5 major sources of such revenue by district. The variations among individual districts are given in Annex 4. There exists a very great opportunity therefore for districts to raise revenue and **reinvest** part of it in the resources from which it is generated provided MINECOFIN and MILALOC provide them with clear policy guidelines.

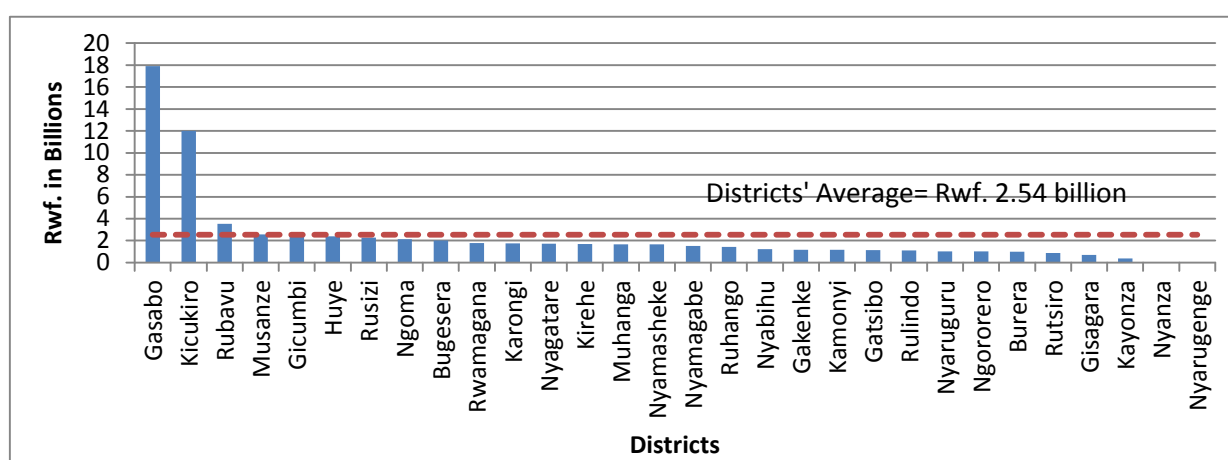
Figure 3.6 Trends of ENR revenues by districts, 2008-2012



Source: Based on Budget Tracking Tool summarised in Annex 4

105. **However, when it comes to total revenue from all sources for the period 2008-2012, it is Gasabo and Kicukiro leading.** The average across the 28 districts is Rwf 2.54 billion as shown in Figure 3.7. It was not feasible under the review to establish the sources of revenue other than those for ENR. It is also likely that some districts may have included donor funding as part of their revenue put on budget. Nonetheless, the urge to MINECOFIN and MINELOC to build the capacity of districts to improve revenue generation has been given some general understanding in the subsequent section. At this juncture, it can be asserted that the government's strategy to regionalize urban areas will likely spread out business opportunities to other rural areas, instead of most of them concentrating in Gasabo and Kicukiro. That will come along with opportunities for more revenue generation as well as employment. That would augur well for EDPRS 2 implementation with respect to youth employment, rural development and economic transformation.

Figure 3.7 : Districts' ranking by total revenues 2008-2012



Source: Based on Budget Tracking Tool summarized in Annex 4

3.10 Districts' plans to improve revenues from environment and natural resources

106. **It is the strategy of the decentralization policy in Rwanda to increase, diversify and broaden local revenue through local economic growth [MINECOFIN, 2010].** The districts' strategies are more or less similar for improving future revenue collection from ENR as shown in Box 3.1. The strategies in that box were generated from the use of the Budget Tracking Tool, in which among others, districts were asked to list only 5 main sources of revenue from ENR over the period 2008-2012. MINECOFIN and MINELOC should therefore cease this as a great opportunity to guide and mentor them in order to ensure uniformity and consistency of practices including determining the values, taxes, rates, fees, royalties, fines from ENR. Equally, they should ensure that the districts' strategies don't aim at revenue *per se* without ensuring sustainability of the resource base, particularly the renewable ones like forests, fish, etc.

Box 3.1: Main strategies for revenue improvement from ENR by districts

- Creating databases of revenue sources e.g Karongi, Huye,
- Separating ENR revenue from the general revenue through proper coding and recording e.g Kirehe
- Outsourcing/privatizing revenue collection e.g Nyaruguru, Gisagara, Musanze, Nyagatare, Kayanza, Ruhango, Kicumbi, Huye, and Nyamagabe
- Increasing fees for cleaning
- ENR pricing and valuation
- Stopping mining and quarrying done unsustainably[Ngoma]
- Rehabilitation of degraded forest areas[Nyamasheke]
- Combating illegal mining[Kamonyi]
- Imposing fines for degradation e.g Rutsiro, Kirehe, Kamonyi and Nyamagabe
- Converting waste and water hyacinth into revenue[Rwamagana]
- Tourism to Rebeto mountain[Kicukiro]
- Revising of laws [Amategeko]

Source: Budget Tracking Tool

3.11 The role of economic instruments in funding environment and climate change

107. **Another financing instrument taking root in Rwanda to finance environment and climate change is environmental fiscal reform or economic instruments.** As a matter of fact, FONERWA which has already attracted £22.5 million pounds from DFID is a childbirth of the GoR to operationalize the economic incentives within the framework of Organic Law No.4/2005. The distributional pattern of funded interventions and those equally rejected from sectors, districts, environmental problems should be a subject of study under the next review and/or by FONERWA. However, in order to increase the share of funding to the sector, FONERWA should equally adopt a strategy to partner with the private sector, including traditional banks to develop feasible projects/products for funding and as a means of leveraging resources from the private sector when it is still well funded. For example, FONERWA could partner with UMERENGE SACCO to be strengthened under EDPRS 2 to popularize energy cooking stoves and biogas in rural areas or to support viable ENR-based enterprises. Building public-private partnerships is strongly advocated for as a strategy to deliver EDPRS 2 goal and objectives. It is well documented thus:

“The EDPRS 2 period is the time when our private sector is expected to take the driving seat in economic growth and poverty reduction”²⁶

3.12 Overseas Development Assistance to Rwanda

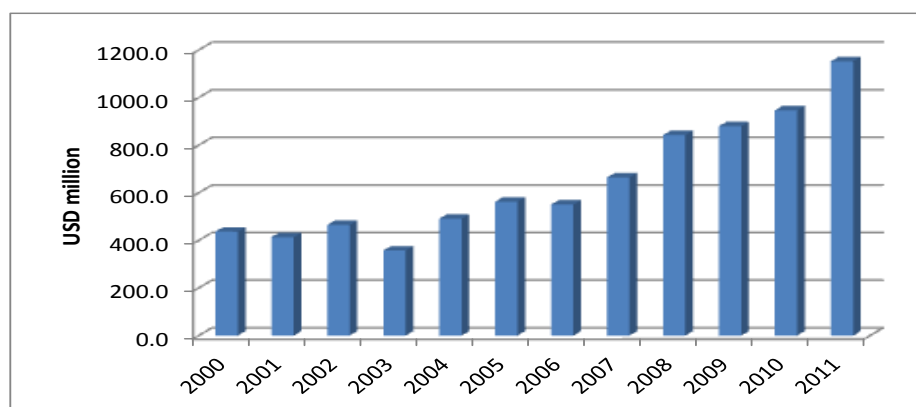
108. **Rwanda’s preferred modality of receiving and putting external aid on budget is general budget support to give it an upper hand for ownership, alignment, harmonization, managing for results and accountability.** It is followed by sector budget support and project support²⁷. The aid effectiveness agenda was set by the Paris Declaration and the Accra Agenda for Action which are intended to forge global consensus for development cooperation to accelerate poverty reduction in developing countries and meet the MDGs by 2015.

²⁶ Page viii, EDPRS 2

²⁷ According to Rwanda Aid Policy

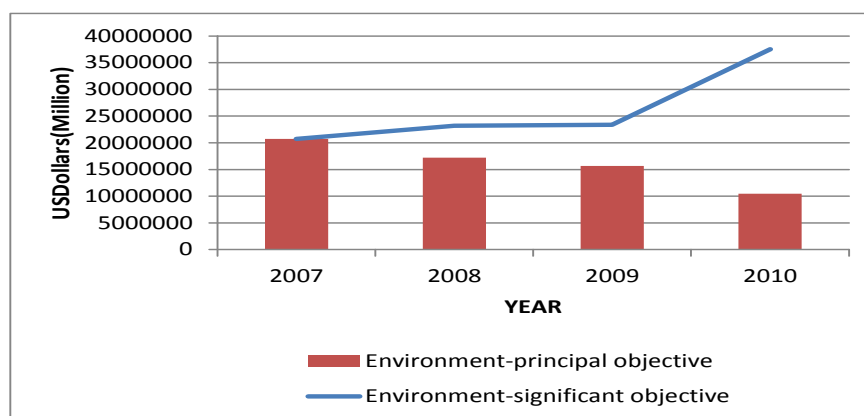
109. **Tracking development assistance for environment and climate change in Rwanda is going to remain extremely important because as high as 39.8% of government budget is financed by aid²⁸.** In accordance with Rwanda's Aid Policy, governments' preference for grants over debts still stands. It is reported in the fiscal year 2011/2012 that 36% of ODA for the government reported in Development Assistance Database [DAD] remains off-budget. Further, in 2010/2011, 71% of ODA was provided through programmes, projects or basket funds [ODA Report 2010/2011]. In 2010/2011 and 2011/2012 fiscal years, general budget support remained at 22% of the budget. Sector budget support on the other hand increased from 7% to 11% over the same years, while project budget support fell from 71% to 67%
110. **The overall trends of all ODA to Rwanda in Figure 3.8 and that for *significant* activities for environment and climate change in Table 3.10 are rising.** On the other hand Figure 3.9 which also captures the amount for environment as a *principal* objective as described in section 1.5 shows it is declining. That is also shown in Table 3.10. To repeat, up to 2009 only ODA for mitigation was being recorded within DAC/OECD development aid database. Further, one should never make totals by year from Table 3.10 to avoid **double counting**, that is, some projects have the same intersection for principal and significant objectives.

Figure 3.8: Trend of Rwanda's Programmable Aid at 2010 prices, USD \$ 2000-2011



Source: DAC/OECD (www.oecd.org/dac/cpa)

Figure 3.9: Trends in environment related aid-Rwanda, 2007-2010



Source: DA/OECD Aid Database

²⁸ Budget speech 2013/2014

Table 3.10: Trends in environmental and climate change ODA to Rwanda, 2007-2010 in USD

	2007	2008	2009	2010
Environment-Principal and significant	20,708,196	23,200,287	23,371,926	37,529,677
Environment-only principal	20,708,196	17,195,794	15,686,015	10,474,708
Climate change mitigation-Principal and significant	20,708,196	22,382,377	25,445,037	8,023,514
Climate change mitigation-only principal	0	234,985	8,786,324	7,6494
Climate change adaptation-Principal and significant	0	0	0	53,915,074
Climate change adaptation-only principal	0	0	0	76,494

Source: DAC/OECDD Aid Database for development aid

111. **The past highly funded projects above USD 5 million in Rwanda for Climate Change during the period 2007-2010 from OECD member states are given in Table 3.11.** The whole list is accessible from DAC/ OECD/ aid statistics. The sector should periodically check how DAC/OECD improves the categorization of aid to developing countries as relevant for environment, climate change (both mitigation and adaptation), biodiversity conservation, and combating desertification.

Table 3.11: Climate change projects above USD 5 million to Rwanda, 2007-2010

Year	Donor	Project title	USD
2007	Belgium	Renewable energy in place	20,533,881
2008	Belgium	Provincial decentralization aid	5,769,508
2008	Netherlands	PAREF II/BTC	14,424,000
2009	EU	Sector Budget Support for Environment and Natural resources	6,343,128
2009	Japan	Project support to child, friendly environment through community participation in Western province	7,173,448
2010	Belgium	Reforestation II	7,947,020
2010	Japan	Project for Rural Water Phase II	16,351,301
2010	UK	Land Tenure Regularization support	23,539,603

Source: DAC/OECD Aid Database

112. A recent publication on financing sustainable development including its financing since Rio in 1992 has some lessons worthy being known by the policy makers in Rwanda as given in Box 3.2.

Box 3.2: Key messages of linking sustainability, development and financing since Rio

1. Donors have failed to deliver on targets they set in Rio 20 years ago
2. Although aid to environment grew from 2001 to 2010, in 2011 it fell in real time for the first time since 1997
3. The potential economic and social impacts of environmental degradation are particularly relevant to developing countries most dependent on natural resources for livelihood and vulnerable to climate changes.
4. The growing populations with aspirations to be gainfully employed calls for all countries to make radical changes in production, consumption and investment practices now.
5. Ministries of Finance have bigger stake than they did in 1992 because of impacts posed by climate change and cost implications of climate proofing and pursuing green growth strategies that are an opportunity to reconcile economic growth with social and environmental objective

Source: OECD [2012] Development Cooperation Report 2012: Lessons in Linking Sustainability and Development. OECD Publishing

113. **The findings on climate change financing have been compared with those of Nepal, Bangladesh, Thailand, Samoa, and Cambodia where several donors commissioned more or less similar studies.** The studies established that climate change related expenditure is not defined within the government chart of Accounts, although it is already significant in some sectors. Secondly, climate change spending often contributes to more than one outcome. Like Rwanda, Bangladesh set up a national climate change trust fund by allocating US\$ 100million in 2009-2010 from the non-development budget. Annual relevant expenditure for climate change is still low as a percentage of government expenditure, 0.5% for Thailand, 1.0% for Bangladesh, and 1.8% for Nepal and minimal for Cambodia [Neil Bird 2012]. In addition, across the above countries the financial systems for climate change are weak, with no common reporting system yet in place between central government, local government and donors. That implies that financial monitoring/tracking systems require strengthening, in terms of both inputs (having clear objectives for expenditure) and outputs [actual expenditures] [ibid]. In terms of funding, FONERWA's funding of £22.5million is more or less comparable to that of the countries Table 3.12.

Table 3.12: Climate change finance to Asian countries, 2010

Country	US\$
1. Indonesia	30.88
2. Philippines	23.32
3. Vietnam	22.98
4. Cambodia	6.62
5. Bangladesh	61.50

Source: Nigel Thornton [2010]

3.13 Classifying aid receipts in Development Assistance Database [DAD] in Rwanda

114. **The categorization of aid receipts in Rwanda does not tally with that one used by DAC/OECD described in the preceding sections.** The Development Assistance Database [DAD] in Rwanda uses the category of 'Environment and Natural Resources'. The database which was accessed as of 8th August 2013 gives the evidence that the share to ENR as at that time was alarmingly low for a country that looks to its natural capital to transform the lives of the poor into a middle income economy [Table 3.13]. As the table shows, there were many as 39 projects under Environment and Natural resources. However, the projects under the sector implemented by REMA which were only contracted between 2008 and 2012 have been studied under chapter 7.

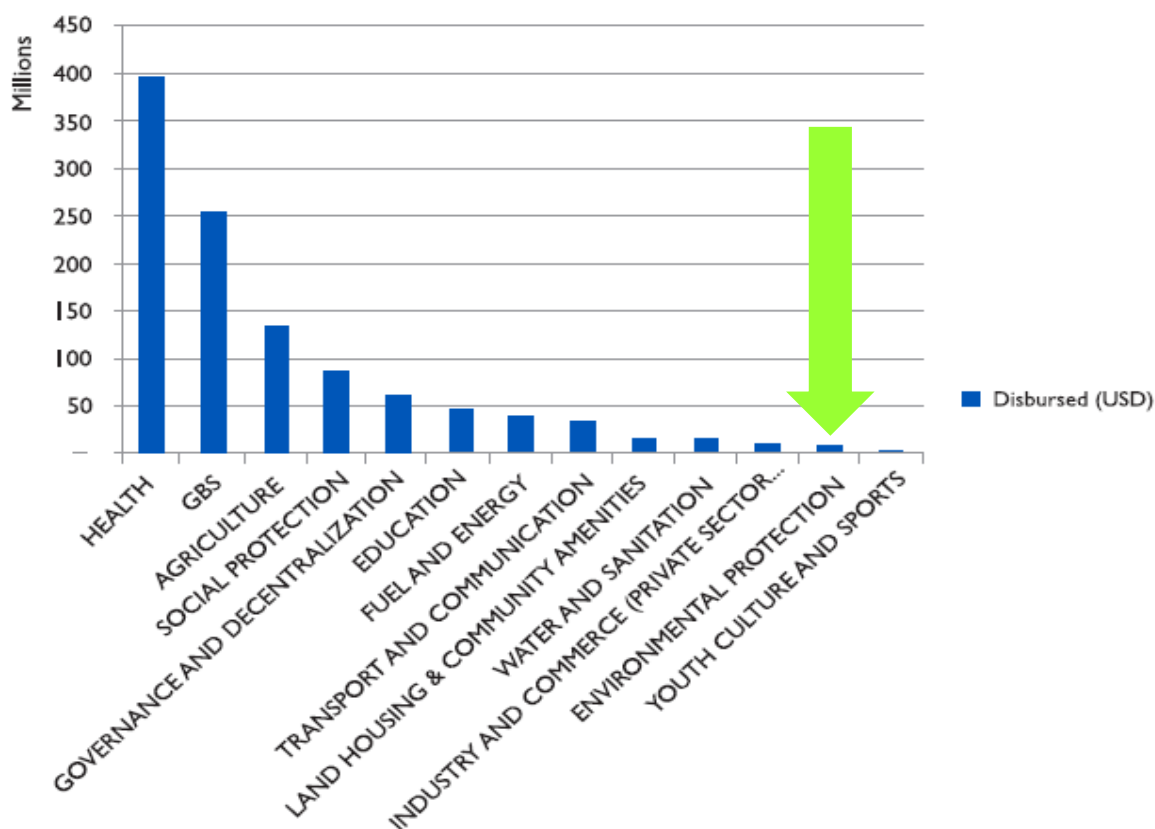
Table 3.13: Proportion of Environment and Natural resources aid receipts in Rwanda

Sector	No. of projects	Committed aid[USD millions]	Disbursed aid [USD millions]
All sectors	881	8,227.7	7,143.6
Environment and Natural Resources	39	113.4	62.2
Proportion to ENR		1.37%	0.87%

Source: DAD in MINECOFIN

115. The above evidence is collaborated with that from MINECOFIN's third ODA report in Figure 3.10 environmental protection's share beats only that of youth, culture and sports.

Figure 3.10: ODA to Rwanda in FY2011/2012 by sectors



116. Going by the same sector classification, the proportion of districts' expenditure on environment protection is given below (Table 3.14)

Table 3.14: Districts expenditures (Rwf000) by sector classification, 2008-2010

Sector	2008	2009	2010
Environmental protection	10,000	10,500	11,025
Total for all sectors	7,351,684	7,719,268	8,105,237
% to environmental protection	0.13	0.13	0.13

Source: MINECOFIN

3.14 Distributional equity of aid receipts among districts

117. Further evidence of the distribution of the receipts for environment and natural resources under DAD disclosed that some ODA is shared by more than one district, while some is categorized as unallocated and unspecified. With that in mind, some districts were found to have received much more than others. For example, Gatsibo and Karongi had over USD 3 million committed against their names compared to Burera, Gasabo, Gisagara, Kicukiro, Muhanga, Nyabihu, and Ruhango which had less than USD 40,000 committed against their names as of 8th August 2012. The limitation of DAD is that it shows committed and disbursed receipts at **a point in time** rather than over a **time period**. Accordingly, it does not necessarily mean that if the district's share is low as of that day, it did not get substantial share sometime back. Like DAC/OECD database on aid, it would also enrich the DAD in MINECOFIN for tracking distributional equity to districts over a time period as opposed to only a point in time. However, in the context of the theme for this report, it was gratifying to find that RLDSF disbursements to districts covered the **period** 2008-2018.

3.15 Shifting to Division of Labour and implications for ENR sector

118. In 2010, the GoR and its development partners [DPs] reached an agreement on the **Division of Labor (DOL)**. This means that new development cooperation framework and programmes will be reduced to maximum 3 sectors per development partner to reduce transaction costs posed on the government side. However, the on-going projects and programmes will run to completion. According to the mapping in the ODA report 2011/2012, there are now seven active development partners for environment and natural resources. They are listed in Table 3.15.

Table 3.15: List of active Development Partners in Environment and Natural Resources

Development partners	Amount (US\$)
1. United Nations	10,613,499
2. Netherlands	7,758,621
3. Sweden	5,447,118
4. UK	4,013,977
5. EU	2,684,524
6. Germany	1,005,952
7. World Bank	414,151
Total	31,937,842

Source: MINECOFIN [2013] ODA Report 2011/2012

119. There is no doubt that embracing of DOL is likely to call for harmonizing the data capture systems in MINECOFIN as strongly observed thus:

“The effective implementation of the Division of Labour [DOL] requires analysis of sector financing and nature and modality of Development Partner [DP] engagement in any given sectors. Given that DAD sector classification differs from the DOL sector, and more detailed analysis is needed for each project/programme level reporting made in the DAD, further consideration may be needed on how DAD reporting can be improved to effectively map out DP sector engagement in the DOL sectors as well as capture accurately the dialogue on project /financing agreement and its compliance to the DOL agreement” [MINECOFIN 2013]

120. Further, ODA disbursement to the productive sectors under which **ENR sector falls** was only 28% when compared to the non-productive sectors which absorbed 72% in 2011/2012. It is reported that more than half of ODA to the productive sectors went to agriculture, followed by energy and transport (MINECOFIN, 2013). Although some partners, notably China and Arab funds contribute most of their funding to productive sectors, and perhaps understating the disbursement to the same sectors, **they are not among those that have contributed to the environmental projects**. It is also reported that funding from USA in the productive sectors is entirely in the agriculture sector through their Strategic Objective Grant Seven (SOAG 07) [*ibid*, pg 13].
121. **There are no doubt new relevant projects which the GoR is implementing but were outside the time period 2008-2012 for this review.** It will be of particular interest for the sector specialists to continue in the engagement processes, including locating data and information sources for environment and climate change. It is only DFID’s funding to FONERWA, ADB’s funding for energy and EU funding for Centralized Urban Sewerage system that have been referred to in some sections of this report.

3.16 Foreign Direct Investment

122. **Foreign Direct Investment [FDI] in Rwanda has fallen from US Dollars 131 million in 2008 to US Dollars 106 million in 2011.** Nonetheless according to a recent study, Rwanda is now the third most competitive country in Sub-Saharan Africa after Mauritius and South Africa [BNR, 2011]. In a study to examine the effect of FDI on economic growth in 47 African countries, it was found that a 1% rise in the ratio of FDI to GDP leads to a rise in growth of GDP 0.7% (Sharma, Basn, Abekah and Joe 2008). The GoR should take advantage of this high FDI partners to influence them embrace the green economy approach either by adopting cleaner production, or putting their Cooperate Social Responsibility [CSR] budgets to fund innovative green growth projects. Some should also be persuaded to do that through FONERWA.

3.17 Conclusion, Key message and Recommendation

123. **No doubt the GoR has put in place enabling policy, legal and institutional framework for environment and climate change, and has not hesitated to improve it further when it saw the justification.** It has also improved the macro, sectoral and sub-regional plans to give effect the implementation of the policy provisions. The financial management systems relevant for accounting to the contributors of funding have equally been improved.

124. However, the fact that a lot of improvement is yet to be made with regard to the proportion of aid that is managed by the use of national procedures and availability of information on resources received by service delivery units implies that carrying out similar public expenditure review in future could be constrained in capturing a lot of data. This is clearly borne out by Table 3.5 particularly the last two aspects in that table with a “D” score in both 2007 and 2010.
125. It has also been highlighted in Table 3.2 that government periodically restructures its ministries to improve coordination and service delivery. It has to be borne in mind always that such reforms equally results in the merger, transfer or introduction of new budget agencies, programmes, sub-programmes through which public expenditure can be tracked. Failure to first assess the institutional reforms in any review could therefore overlook a key step.
126. The districts’ capacity building needs listed in Table 3.3 are many, requiring several strategies and investments to address them, both in the short run and long run given their comparative advantage to operationalize the subsidiarity principle.
127. **As the GoR is competing to access adequate financing for the whole country, the ENR sector too has to continually go by the same rule of competing for scarce resources.** That competition is likely to be stiffer in future as all programmes and projects close, and as DOL fully takes root. The districts strategies efforts to enhance revenue generation, including from ENR are well intended and timely. Districts too are in search of long term financial sustainability, including improving revenue generation from ENR. MINECOFIN, MINIRENA and MINALOC should cease it as an opportunity to guide them in that endeavour so that they adopt uniform strategies.
128. **The government has some goodwill from some development partners and the private sector through FDI, and it would be in its interest to reconstitute the Sector Working Groups to lobby and justify a well-funded comprehensive programme for environmental mainstreaming and climate proofing for all stakeholders.** In particular the sectors should use the foundation of the environment to transform the economy into a middle income economy, its cross-sectoral benefits [e.g. to energy, health, industry, commerce and trade] and to follow the green economy path as its selling “flagships” for equitable share of the financial resources for mainstreamed interventions across

Message 3: The policy, institutional and financing landscape for environment and climate change is improving globally, nationally and locally, but calling for pro-active strategies to systematically engage it to get a reasonable share of the resources for the ENR sector and for mainstreamed interventions across all sectors.

129. It is hereby recommended that all the sectors and districts should prioritize the following interventions:
- (i) Revising their sector plans and aligning them with EDPRS 2
 - (ii) Improving capacities especially at district level
 - (iii) Broadening revenue base to the sector by implementing strategies listed in Box 3.1
130. It is also recommended that MINECOFIN addresses the pending public financial management aspects still ranked low ["D"] in Table 3.5 to ease future public expenditure reviews in all sectors.
131. Further MINECOFIN, MINIRENA and MINELOC should provide clear policy guidance to districts on how to enhance their revenue generation from ENR and its reinvestment so as to ensure uniformity across districts.
132. Finally, the government should formulate a climate change policy in its own right to guide all sectors in climate proofing their investments.

4: PUBLIC EXPENDITURE REVIEW FOR ENVIRONMENT AND CLIMATE CHANGE

4.1 Overall public expenditure for environment and climate change among public institutions

133. In order to understand the findings under this section in respect of Table 4.1, one's attention is drawn to the following:
- (i) Only all programmes and sub-programmes under the ENR sector and other sectors that reflected relevant titles were included because that is how the chart of accounts is designed. It is this methodology that was used because the chart of accounts is not 'activity' based and therefore it is not practically feasible to track expenditure by **activity** in the all the sectors.
 - (ii) It is based on both the Budget Law and execution figures for all public institutions only as released by MINECOFIN.
 - (iii) MINECOFIN budget execution data did not show the breakdown for programmes and sub-programmes for 2009-2010
 - (iv) Some sub-programmes were not included in Table 4.1 e.g. HIV/AIDS and environment under MINEDUC because it was not easy to establish the proportion to each of these cross-cutting issues by year and across the review period.
 - (v) Likewise, even though there was a sub-programme for disaster management under MININTER, its budgets and expenditure were not included because the proportion apportioned to environmental and climate change disasters by each fiscal year could not be plausibly established.
 - (vi) Under MINISANTE, the sub-programme for 'promotion of hygiene and environmental health' was found to fall under two different departments, and its reflection twice in Table 4.1 is not duplication.
 - (vii) The table does not include expenditure by non-state actors, that is, private firms, NGOs, CSOs, communities and households because they do not have a budget repository of their own.
134. With the above background, it is observed that:
- (i) Other ministries other than MINIRENA take a reasonable share of the expenditure and therefore accompanying that share with responsibility for environmental management should not come into question e.g. MININFRA, MINAGRI.
 - (ii) It is in 2011-2012 that the earmarked funds to districts through respective ministries were given some detail both in the budgets and execution reports, confirming that MINECOFIN has continually improved the public financial systems.
135. The main implication is that if the practice to break down districts' earmarked funds for environment and climate change by programmes and sub-programmes is maintained in future fiscal years, it will signal to them the changing priorities of government as they budget.

Table 4.1: Relevant obvious programmes and sub-programmes for environment and climate change under ministries, 2008-2012 [Rwf. billions]

	2008		2009 mini		2009/2010		2010/2011		2011/2012	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
MINIRENA [All programmes/sub-programmes]	5,659.34	4,210.61	6,586.78	2,912.59	7,609.75	6,857.98	9,028.75	8,017.50	8,948.8	7,365.2
OTHER MINISTRIES [Obvious sub programmes only]										
PRESIREP										
Wildlife Conservation			100.20	4.29					2,290.94	0.00
MININTER										
Risks and Disaster Management										
MININFRA										
Metrology	498.05	450.38								
water and sanitation	9,905.70	16,957.32	3,811.90	3,687.20	5,165.24	3,641.53	8,449.21	11,005.52		
Weather forecasting					1,872.44	1,315.55	1,569.51	572.83	1,468.87	1261.66
Equipment infrastructure of treatment and forecast			17.66	17.66						
Rehabilitation of weather stations			39.22	12.79						
Promotion of weather services			8.53	8.00						
Maintenance			11.56	29.77						
Energy										
Diversification of energy sources and supply security			756.41	718.30					6,501.55	6,141.68
MININTER										
Risk and Disaster Management	84.61	76.55	29.64	15.70	79.73	70.91	215.56	138.06	125.77	152.99
Dissemination of risks and disasters management policy										
Disasters prevention										
Material and financial support for victims										

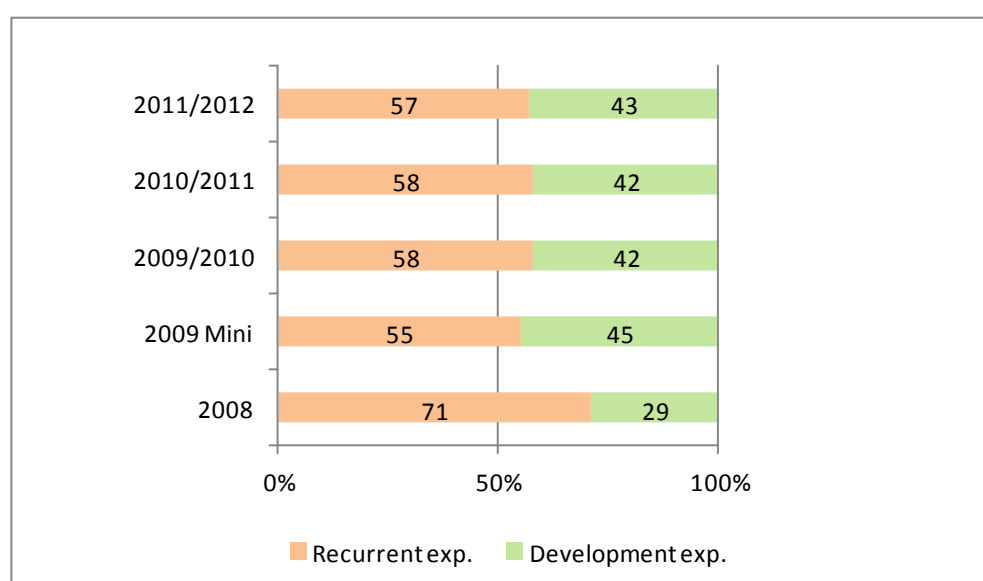
Disaster Risk reduction										
Disasters management										
MINAGRI										
Sustainable Management of Natural resources and soil conservation			607.54	604.53					1,442.28	1,442.28
Irrigation development			1,279.61	1,279.56	1,575.35	1,371.56			6,311.17	7,063.26
Food security and Vulnerability Management									45.71	45.70
MINISANTE										
Promotion of hygiene and environmental health			6.27	0.88					59.15	56.9
Promotion of hygiene and environmental health			11.09	3.78					247.55	185.93
DISTRICTS										
Forestry resources management (MINITERE)	1,455.30	1,455.30	454.19	454.19					1,496.94	1,496.94
Sustainable Management of Natural resources and soil conservation			313.92	313.92					1,516.93	1,516.80
Food security and vulnerability management			57.22	57.22						
Water and Sanitation (MINIRENA/MINITERE)	54.20	54.20	14.65	14.65	34.61	34.08	34.61	34.26	778.54	778.54
Irrigation Development									204.24	204.24
Water and Sanitation (MININFRA)										
Integrated Water Resource Management (MINIRENA)									365.75	365.75
TOTAL-Relevant public programmes/sub-programmes	17,657.20	23,204.36	14,106.39	10,135.03	16,337.12	13,291.61	19,297.64	19,768.17	31,804.19	28,077.88

Source: MINECOFIN's budget execution excel sheets

4.2: Analysis of public expenditure and input mix under the lead ministry, MINIRENA

136. The analysis of expenditure under this section has been made in conformity with the institutional reforms that were made between 2008 and 2012 as fully reflected in Table 3.2²⁹. As Figure 4.1 shows, the proportionality of recurrent to development expenditure was similar in many fiscal years except in 2008. A very high ratio of current to development expenditure is conventionally interpreted that the government is not investing enough in the sector and is only incurring high recurrent costs. The proportionality of recurrent expenditure was higher than development expenditure in 2008 because of the restructuring of water and sanitation sub-sector to MININFRA and delayed disbursement of funds for the land programme³⁰.

Figure 4.1: Trends in the proportionality of recurrent and development expenditure

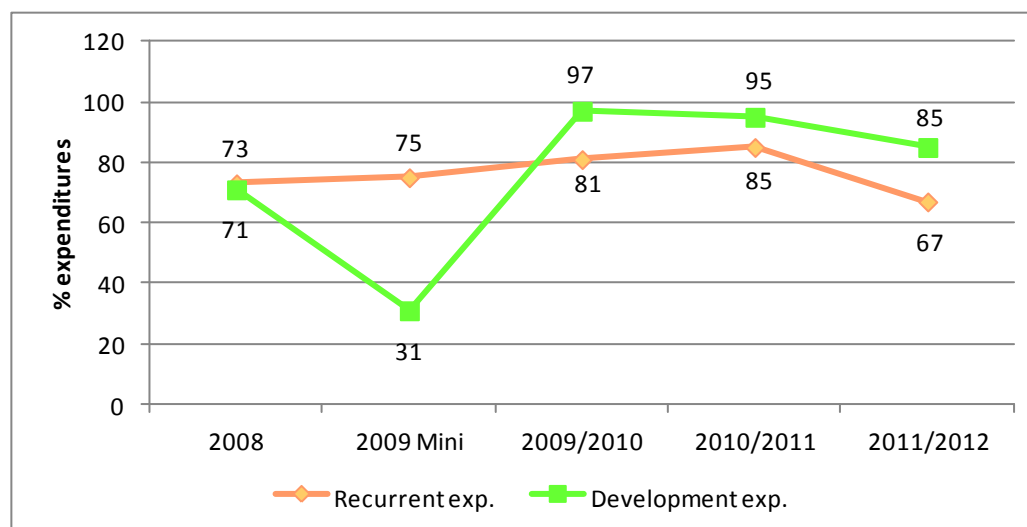


Source: Budget execution tables from MINECOFIN

137. With respect to the execution rates, only exceptionally low or high rates have been explained. Execution rates in Figure 4.2 are taken along with those of sub-sectors in Table 4.2. In the mini budget of 2009, the execution rate of development expenditure was exceptionally low because of restructuring which separated water resources from water supply and sanitation

²⁹ However, for purposes of this chapter, the name consistently used is MINIRENA

³⁰ According to the Joint Sector Review for 2008.

Figure 4.2: Trends in execution rates for development and recurrent expenditure

Source: Budget Execution, MINECOFIN

138. It is noted that the execution rates for IWRM and for the environment were exceptionally low in Table 4.2. The former was affected after the restructuring separated the department which was therefore building itself afresh. Save for 2009 when the actual expenditure was only 44% of the budget, other years generally registered much higher execution rates. The reasons for low execution rates 2009 mini-budget were mainly because of the following reasons among others:
- (i) Overall, there was inadequate human resource and technical capacity mainly attributed to delayed proposal to merge NLC, NAFA, IWRM and OGMR into the Natural Resources Board.
 - (ii) NAFA was at its startup stage and was more pre-occupied with recruiting staff and due to low staff and as such the implementation of the development budget particularly PAREF could not be as high as would be expected.
 - (iii) Land's development budget execution was also low [56%] because of delays in the roll out of the land tenure regularization programme that DFID has promised to fund.
 - (iv) REMA'S execution of the development budget was only 35% because of two main reasons: the delay in funds transfer from the donor and some procurements processes which delayed as they had to be mutually agreed.
139. A key limitation of JSRs is that they are neither uniformly structured nor given equal coverage in terms of pages to facilitate tracking of improvements across years and sub-sectors. It would thus be recommended that MINIRENA comes up with a generic outline that should be used for JSRs to facilitate temporal comparisons.

Table 4.2: Trends in budget, expenditure and execution rates by sub-sectors under MINIRENA, 2008-2012

	2008			2009 Mini			2009/2010 ³¹			2010/2011			2011/2012		
PARENT MINISTRY[IES]	MINITERE			MINIRENA			MINELA/ MINIFOM			MINELA / MINIFOM			MINIRENA		
	Budget	Actual	%exec	Budget	Actual	%exec	Budget	Actual	%exec	Budget	Actual	%exec	Budget	Actual	%exec
1. Administration and Institutional development	626.34	446.53	71%	826.37	386.37	47%	1 115.09	772.15	69%	934.47	799.94	86%	1 192.13	598.19	50%
2. Land	1 584.71	1 052.94	66%	1 954.93	1 155.90	59%	0.00	0		4 291.01	3 886.11	91%	2 845.68	2 643.42	93%
3. Environment and climate change	1 882.34	1 682.42	89%	1378.54	387.69	28%	0	0		1 366.46	1 083.11	79%	1 350.10	1 085.64	80%
4. Forestry	690.99	472.78	68%	557.68	343.55	62%	0	0		1 094.57	954.46	87%	1 403.35	1 363.60	97%
5. Water and Sanitation	364.08	178.97	49%	0	0	0%	0	0		0.00	0.00	0%	0.00	0.00	0%
6. Integrated water resources	0	0	0%	1 591.83	370.58	23%				684.53	540.87	79%	781.91	378.41	48%
7. Mining	510.88	376.97	74%	277.08	268.51	97%	0	0		657.71	753.01	114%	1 375.63	1 295.95	94%
Total	5 659.34	4 210.61	74%	6 586.43	2 912.60	44%	7 609.75	6 857.99	90%	9 028.75	8 017.50	89%	8 948.80	7 365.21	82%
Total Government	528030.54	521239.59		319502.36	294796.67		703962.48	693509.00		805162.33	812782.24		933530.98	932972.30	
% to MINIRENA	1.1%	0.8%		2.1%	0.9%		1.1%	0.9%		1.1%	0.9%		0.9%	0.7%	

Source: MINECOFINE's budget execution excel sheets

³¹ Breakdown not given by MINECOFIN's budget and execution data

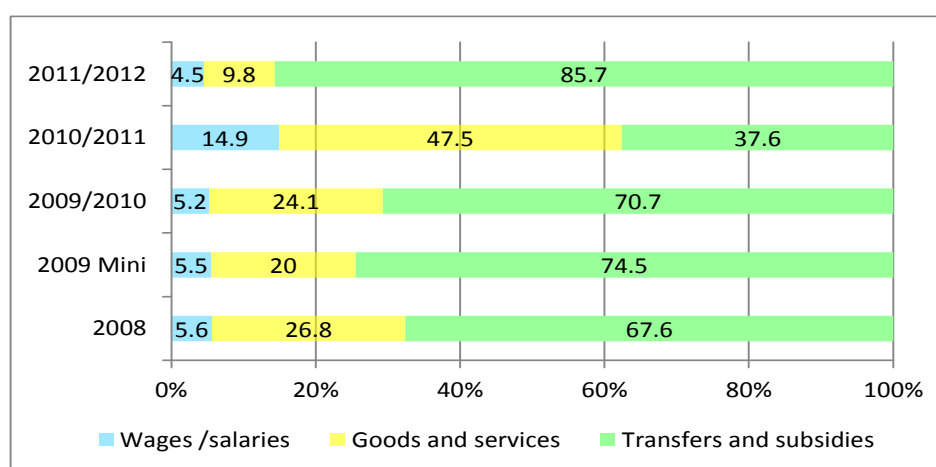
140. Table 4.3 on the other hand presents the proportion of actual expenditure by different departments of the ministry. In 2011/2012, lands sub-sector absorbed 36% of the budget, more than environment and climate change which took 15%. The proportions however changed over years. For example, the proportions to mining doubled in 2011/2012 compared to previous years. Likewise, the proportion to forestry attained the level of 19%, much higher than the previous years where it ranged between 11% and 12%.

Table 4.3: Trends in inter-sectional total expenditure in Rwf billions and proportionality

	2008		2009 Mini		2009/ 2010 ¹		2010/ 2011		2011/ 2012	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1.Administration and Institutional development	446.53	11%	386.37 ¹	13%	772.15	11%	799.94	10%	598.19	8%
2.Lands	1 052.94	25%	1 155.90	40%	-		3 886.11	48%	2 643.42	36%
3.Environment and climate change	1 682.42	40%	387.69 ¹	13%	-		1 083.11	14%	1 085.64	15%
4.Forestry	472.78	11%	343.55	12%	-		954.46	12%	1 363.60	19%
5.Water and Sanitation	178.97 ¹	4%		0%	-		-	0%	-	0%
6.Integrated Water Resources	-	0%	370.58	13%	-		540.87	7%	378.41	5%
7.Mining	376.97	9%	268.51	9%	-		753.01	9%	1 295.95	18%
Total expenditure	4 210.61	100%	2 912.60	100%	6857.99	100%	8 017.50	100%	7 365.21	100%

141. With respect to the analysis among economic classification, Figure 4.3 shows the different proportions for wages and salaries, goods and services, transfer and subsidies.

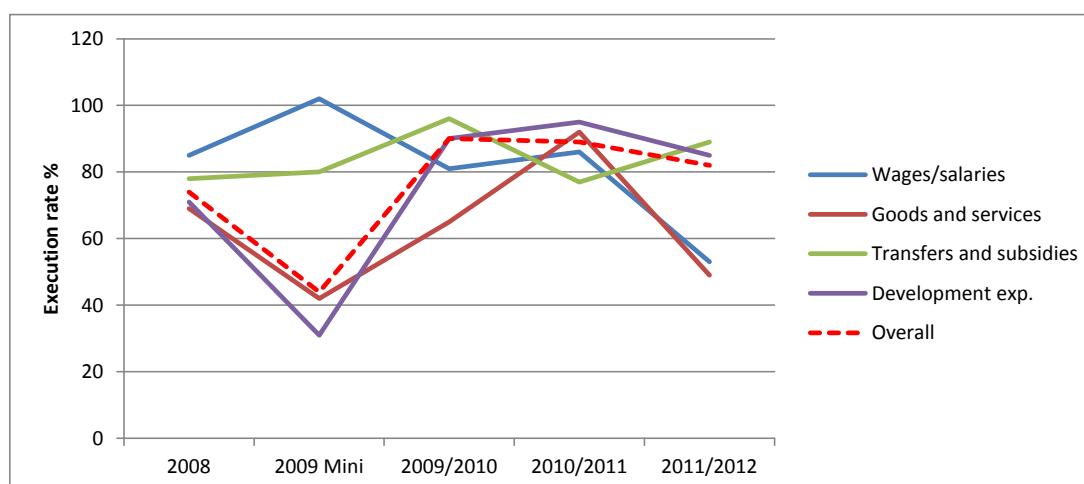
Figure 4.3.Trends in proportionality of recurrent expenditure among economic classification



Source: Budget Execution, MINECOFIN

142. A noticeable feature is that in 2010/11, the proportionalities of wages and salaries and goods and services were exceptionally high. The main reason is that the management support expenditures (salaries, office furniture, ICT equipment and other related expenses) were given to MINIRENA instead of returning the budget to MINECOFIN. This overloaded MINIRENA's budget since there was no clear indication on how to spend it [MINIRENA's JSR 2010/2011]. With respect to execution rates, the 2009 mini-budget experienced generally low execution rate of 31% for development expenditure [Figure 4.4] because of the reasons already given.

Figure 4.4: Trends in execution rates of economic classification under MINIRENA



Source: Budget Execution, MINECOFIN

4.3 Variance between approved budgets and actual expenditure

143. It is observed in Figure 4.2 that MINIRENA never achieved 100% execution rate for either recurrent or development expenditure. By implication, the difference between the execution rates and 100% translates into variances that were not spent in their respective fiscal years. The reasons for the variances include:
- (i) limited staffing and capacities to absorb all funds
 - (ii) Institutional reforms that slows down planning and requests for funds
 - (iii) some activities and the use of their related budgets are nature dependent e.g. tree planting depending on timely rainfall, and drought can delay implementation of activities.
144. There are two main implications arising from the failure to attain 100% execution rates:
- (i) MINECOFIN cannot be 'persuaded' to substantially allocate more budget to the sector when the sector has not demonstrated it can absorb the amount allocated to it.
 - (ii) The sector can fall short of meeting its targets

4.4 Progressiveness of government spending on environment

145. Table 4.4 shows the progressiveness of government spending on environment vis-à-vis all the sectors. The table cannot be construed in isolation. The findings need to take into account the fact that the analysis is **solely** based on the COFOG which Rwanda uses and therefore excludes expenditure for mainstreamed interventions because of the many structural limitations given in various sections of the report.

Table 4.4: Progressiveness of government spending on environment vis-à-vis all other functions

Aspect	2009/2010	2010/2011	2011/2012	2012/2013
1-Environmental protection (Rwf. billions)	12.7	17.3	25.6	39.43
2-Total government expenditure(Rwf. Billions)	898.9	984.0	1,194.1	1,549.8
3-Proportion to environmental expenditure(%)	1.4	1.7	2.1	2.5
Annual growth rate for environmental protection (%)	-	36.2	47.9%	54.0%
Annual growth rate for all government functions (%)	-	9.4	21.3%	29.7%

Source: Organic Budget Laws

146. As the above table shows, the annual increase to environment was higher than that of the whole government taking advantage of three main factors, namely the increase in government revenue over the period, the increase in the ODA inflows and strong lobbying and advocacy from the sector. That has to seriously be interpreted cautiously given that it has already been reported in Figure 3.10 that the ODA report in Rwanda ranks environment among the least funded.

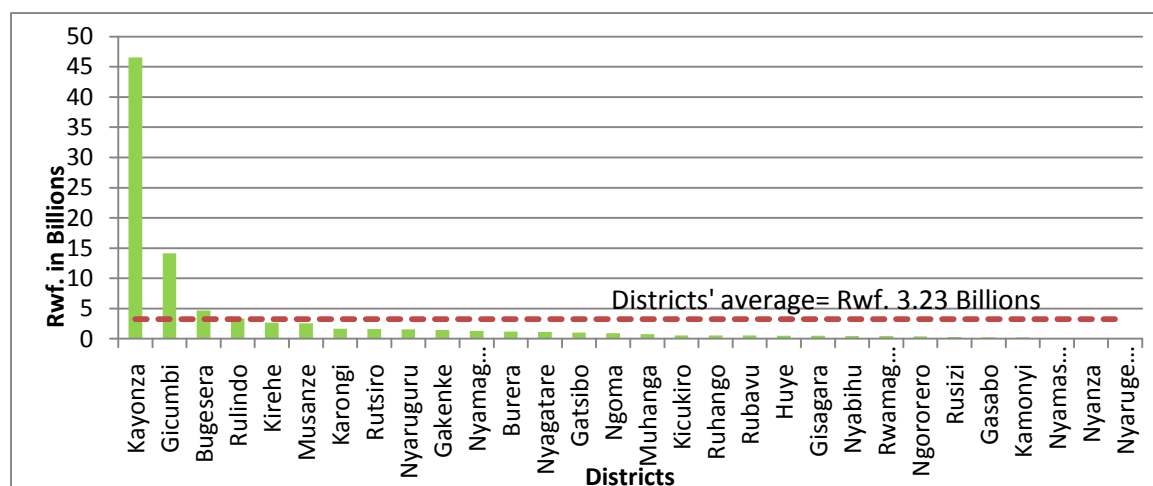
4.5 Analysis of expenditure for environment and climate change under Districts

147. Expenditures for Districts in this chapter are only based on the submissions from the budget tracking tool. Those under RLDSF have been studied under chapter 5. Suffice it to mention that districts are very strategic for operationalizing the subsidiarity principle which states that to the extent possible, the people close to the environmental problems should be actively involved in addressing them. Figure 4.5 depicts exceptionally high expenditures by Kayonza and Gicumbi Districts. They are explained thus:

- (i) Kayonza- high expenditure for protecting 38,767ha of forests, with budgets of up to 9,691.71million per year and anti-erosion radical terraces [15,000ha] with budgets of Rwf 950 million among others

- (ii) Gicumbi- progressive terraces [60ha] each year costing Rwf 501 million per year and radical terraces [840ha] per year costing Rwf 643 million and biogas in secondary schools and prison for 5 years costing Rwf 500 million.

Figure 4.5: District expenditure for environment and climate change 2008-2012



Source: Based on Budget Tracking Tool

4.6 Tracking expenditures to the end-users

148. The submissions of externally funded expenditure for environment, natural resources and climate change for fiscal years 2009/2010 to 2011/2012 using the budget tracking tool helped to confirm some of the projects listed in both DAC/OECD aid database and budget law by MINECOFIN [e.g. PAREF,DEMP1,DEMP II,LWH,KWAMP]. However, the tool showed some projects and interventions not clearly traceable vertically in the national budget and therefore collaborating with existing knowledge that some aid flows are not on budget. The following example confirms this finding
- (i) Vi-Life programme for soil conservation by Vi Agroforestry in Gasabo for Rwf.36,720,000 in 2011/2012
 - (ii) Agro-action allemand in [Rwf 83 million for 2009/2010 and 2010/2011] in Ruhango District
 - (iii) Rwanda Organisation for Development in Ruhango worth [Rwf.25,000,000 in 2011/2011]
149. There are three main policy implications and two recommendations, namely:
- (i) Some of the expenditure relevant for environment ,natural resources and climate change can only be captured at the level of **end-users**
 - (ii) It explains strongly the rational for all development partners to use the government system for their support so that MINECOFIN can objectively establish the share and distributional equity of the expenditure across districts and to the **end-users**

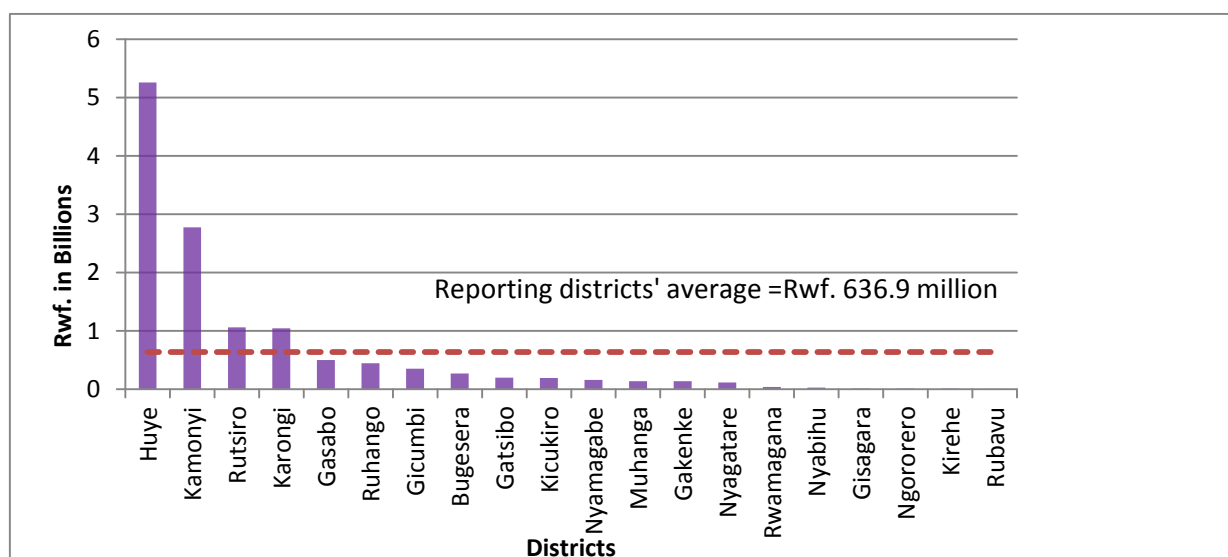
- (iii) MINECOFIN should institutionalize Public Expenditure Tracking Surveys (PETS) to complement public expenditure reviews in all sectors to establish whether the budgets intended for **end-users** actually reach them and/or is used for their intended activities, and to identify leakages, if any before it can prescribe the corrective measures.

4.7 Analysis of expenditure under the private Sector, NGO, CBOs, and communities.

150. The above analysis is based on the budget tracking tool.. Given that the above institutions may have been contracted by Ministries or Districts using their respective budgets already reported in other sections of this report, adding their expenditure to that of government would tantamount to double counting. It was therefore avoided. However from their listing in Annex 6 and summarized in Figure 4.6 , are some interesting revelations, namely:

- (i) There is a pattern of preference for some interventions like tree planting, energy substitution to gas and radical terraces to others like production of biodegradable products and income generation from non-forest products like honey.
- (ii) Some interventions reflect the peculiar challenges or opportunities by district like waste collection[Kicukiro], establishing a hedge of sisal in the buffer zones of Akagera National Park [Gatsibo] and Giswati Forest Conservation [Rutsiro]
- (iii) Expenditures that are high are generally understandable like establishment of 286 ecological sanitation toilets in 2011/2012 fiscal year in Huye [Rwf.5.2 billion]; and protection of Mukunguri river banks [Rwf.5000m in 2008], bamboo nurseries, rain water harvesting and ecosan in Kamonyi.

Figure 4.6: Ranking of private NGOs and CBOs expenditure for environment and climate change by district 2008-2012



Source: Based on Budget Tracking Tool

4.8 Benchmarking and comparing inter-country expenditures for environment

151. Table 4.5 shows how countries compare on their spending on environment. Whereas they carried out their reviews at different times, there is a general pattern to show that;

- (i) most developing countries expenditure on environment as a percentage of GDP is low
- (ii) Rwanda's expenditure on environment as a percentage of GDP was 0.89% in 2012 and is comparable to other developing countries
- (iii) The average for EU countries as of 2.25% is slightly higher than that most developing countries but there are variations even among the EU countries.

Table 4.5. Inter-country comparison of environmental expenditures as percentage of GDP

Country	Year of PEER	Environmental expenditure as % of GDP
1. Azerbaijan	2011	0.5%
2. Rwanda	2012	0.89%
3. EU countries	2009	2.25%
4. Slovenia	2011	0.95%
5. Bhutan	2008	2.80%
6. Namibia	2006	0.4%
7. Botswana	2012	0.7%
8. Mozambique	2007	1.3%

Source: Various sources on internet accessed on 24th November 2013.

4.9 Progress on the practice of mainstreaming

152. The government has made strides in environmental mainstreaming through multiple entry points including awareness creation and capacity building, formulation of guidelines for sectors, the budget call circular by MINECOFIN, recruiting staff in sectors and districts, adopting cleaner production systems, and influencing institutions to improve their systems to take on responsibility for some aspects of environmental management within their mandate. For example, NISR fully integrated issues of environment in EICV3 and produced a report on environment. The government is even going a step higher to pilot environmental (green) accounting. Collectively, these achievements are building up a cadre of champions to sustain the momentum. Above all, the annual growth rate of funding to environment functional classification has grown at a higher rate than that for all sectors as shown in Table 4.4 despite the fact that it is one of the least funded classifications. The contribution from lobbying and advocacy for environment in the recent past cannot be under-rated.
153. It was gratifying that the government and MINIRENA have made objective self-assessments of their progress in mainstreaming at national level within EDPRS 1 and at sector level. They should follow up immediately to seek appropriate technical assistance to address the pending challenges. That open and objective self-assessment is quoted below for the national level assessment and in Box 4.1 for the sector.

“While sectors and districts acknowledge progress in integrating cross-cutting issues of gender, HIV/AIDS and environment, they also highlighted the need for more tools and guidance on effectively mainstreaming cross-cutting issues into their plans, budgets and M&E”³²

Box 4.1: Self-assessment and recommendations for cross cutting issues (environment)

Findings of self-assessment by MINIRENA for the ENR sector on mainstreaming environment as a cross-cutting issue are that:

- (i) EDPRS 1 did not recognize the cross cutting nature of water resources, a factor that made sectors overlook capturing progress related to water
- (ii) Working with other sectors was not easy

Some of the recommendations from the assessment are:

- (i) There is a need to have **clear guidelines** about how to integrate cross-cutting issues in other sectors
- (ii) Sectors should provide guidance to decentralized entities clear guidance about their priorities and how they should be integrated in the district strategies
- (iii) Partnerships are critical to ensuring that environmental mainstreaming is understood and that knowledge is translated into action.

Source: MINIRENA [2011] Environment and Natural resource sector EDPRS Self-assessment

154. The difficulty to fully mainstream environmental issues is not unique to Rwanda. From the author’s , one of the challenges countries, institutions and individuals face is that despite numerous generic guidelines in public domain, it requires extra effort to translate them into operational reality according to their mandate, systems, knowledge, and capacity. Individuals with responsibility for mainstreaming come from different background and disciplines and in one way or another they need to attend refresher courses to improve their skills on regular basis. In 1990s, European Union Commission had to make **checklists** on how to identify environmental impacts by sector and how to mainstream them in planning, budgeting and monitoring. Some countries have taken the same route of checklists. The advantage of checklists is that they tend to be “activity” specific, a factor that makes it easy for any team implementing that activity to move in unison.
155. To illustrate and re-emphasize the above point, the cardinal principal is that ‘mainstreaming is best achieved if it is activity specific’. Providing walk-ways for the people with disabilities to public buildings is a mainstreaming intervention just as purchasing energy saving bulbs to fit in the same building. The activities may be in the same sector of housing, but different people may be involved in mainstreaming environment in each activity. Putting in place environmental fiscal reforms so that industries substitute inefficient technologies with more efficient ones is a mainstreaming activity just as improving the chart of accounts to guide the sectors in reflecting their budgets for mainstreamed interventions in the budget.

³² MINECOFIN [2011] EDPRS: Lessons learnt, 2008-2011

156. Both activities may be under finance, but the departments that may have responsibility to implement them are different. The list can go on. One can notice therefore that the benefits are diverse and tied to the activity. They include, ensuring human rights, safety, cost saving, risk avoidance and behavioural change. Communicating the potential benefits must come upfront in any mainstreaming process. Failure to recognize this step makes mainstreaming appear an add-on responsibility without commensurate benefits.
157. A case study based on the ELECTROGAZ's income statement for 2008 on its web shows how the utility, now known as EWSA is missing the benefits for mainstreaming, and likely increasing not only its operational costs, but also transferring to its consumers. It is shown in Table 4.6 that the cost of chemicals as a percentage of water sold has ranged between 13.7% and 29.8% between 2005 and 2008. At the same time, government subsidies to the utility have also grown over years. Even if its revenue has also grown over the same period, it could have been made by the utility investing in its water catchment watershed or implementing Payment for Ecosystem Services [PES] so as to avoid cost of chemicals. That could probably also lower the tariff to the consumers³³.

Table 4.6: Comparison between sale of water and cost of chemicals to treat water by ELECTROGAZ in Rwf. (millions)

Parameter	2005	2006	2007	2008
Sale of water	2564	2976	5845	6496
Cost of chemicals	675	887	672	893
Cost of chemicals as % of sale of water	26.33	29.81	11.50	13.75
Subsidies for water to ELECTROGAZ	735	3124	4688	5454

Source: ELECTROGAZ Annual Report, 2008

4.10 Trends from PEER [2005-2008] to PERECC 2008-2012

158. The following trends are discussed under the following sub headings;
- (i) trends of findings from PEER and PERECC that can be comparable
 - (ii) the extent to which the PEER recommendations were implemented
 - (iii) the value-addition introduced in PERECC that were not covered under PEER
 - (iv) Underlying reasons value-addition under PERECC in comparison with PEER
- **Trends from PEER and PERECC then are comparable**
159. The findings in Table 4.7 show that :
- (i) the proportion of the budget to MINIRENA was lower under EDPRS 1 [2008-2012] than it was before, that is 2005-2008.

³³ EWSA 2008 Annual Report

- (ii) Land sub-sector has consistently taken the bigger share in most fiscal years, save for 2007 when water and sanitation took the biggest budget (75%) before it was transferred to MININFRA
- (iii) Environment has had impressive execution rates except in 2009 mini-budget due to delay of funds, and delay to resolve procurement procedures
- (iv) Mining's execution rates have been impressive from 2007
- (v) Among the economic classification, the proportion taken by goods and services in 2005 was mainly taken up under transfers and subsidies particularly after 2009 mini-budget
- (vi) Execution rates have generally been impressive save for development expenditure and goods and services 2009 mini-budget for reasons already given

Table 4.7: Trends from PEER, 2005-2008 to PEREC 2008-2012 in reference to MINIRENA

Aspect	2005	2006	2007	2008	2009 mini	2009/10	2010/ 11	2011/1 2
1. Proportion of budget spent by MINIRENA (%)	1.1	2.4	2.9	0.8	0.9	0.9	0.9	0.7
2. Proportion of budget spent under environmental protection (%)					1.4	1.7	2.1	2.5
3. Intra-sectoral absorption of expenditure under MINIRENA (%)						11		
- Administration			5	11	13	N/A	10	8
- Land			8	25	40	N/A	48	36
- Environment & climate change			5	40	13		14	15
- Forestry			3	11	12	N/A	12	19
- Water& sanitation			75	4	-	N/A	-	-
- IWRM			-	-	13	N/A	7	5
- Mining			4	9	9	N/A	9	17
Total			100	100	100	100	100	100
4. Intra-sectoral execution rates under MINIRENA(%)								
- Administration	82.3	86.9	120.5	71.3	47.0	69.0	86.0	50.0
- Land	147.8	64.8	90.0	66.4	59.0	N/A	91.0	93.0
- Environment & climate change	116.5	145.8	90.9	89.0	28.0	N/A	79.0	80.0
- Forestry	84.1	97.0	99.0	68.0	62.0	N/A	87.0	97.0
- Water& sanitation	86.7	67.0	106.0	49.0	-		-	-
- IWRM	-	-	-	-	23.0	N/A	79.0	48.0
- Mining	52.4	45.4	92.2	73.8	97.0	N/A	114.0	94.0
5. Intra-sectoral allocation by economic classification under MINIRENA (%)								
- Wages and salaries	7	3	5	4	5.5	5.2	14.9	4.5
- Goods and services	81	34	11	19	20	24.1	47.5	9.8
- Transfers	12	7	5	48	74.5	70.7	37.6	85.7
- Development expenditure	0	56	79	71	31	97	95	85
6. Execution rates by economic classification under MINIRENA(%)								
- Wages and salaries	N/A	N/A	N/A	85	102	81	86	53
- Goods and services	N/A	N/A	N/A	69	42	65	92	49
- Transfers & subsidies	N/A	N/A	N/A	78	80	96	77	89
- Development expenditure	N/A	N/A	N/A	71	31	97	95	85
- Overall for ministry				74	44	90	89	82
- Overall for government				99	92	99	101	100

- **the extent to which the PEER recommendations were implemented**

160. One of the achievements under EDPRS 1 was the implementation of the recommendations made under PEER, in 2009. The commitment to continue implementing those that need more time is high. The government should equally implement those under this PERECC report.[Table 4.8]

Table 4.8: Progress in implementing PEER recommendations of 2009

Recommendations from PEER,2009	Extent of implementation
1. Government should allocate more resource to the sector	Done
2. ENR sector should develop and strengthen an integrated environmental management system that can serve to measure output/outcome effects, and for use in the writing of SOEs	The same recommendation is strongly highlighted under EDPRS2 but not yet implemented
3. MINECOFIN should increase REMA's budget to enable it implement its primary mandate of ensuring that all development plans integrate environment	Done
4. REMA working with MINIRENA should expedite the processes for the establishment of FONERWA	Done
5. Ministries should identify opportunities for transferring some of their expenditure to the private sector e.g through PPPs, outsourcing contract management and privatization	On-going process
6. Sector-specific training programmes on identification of cross-sectional environmental impacts and policy instruments to address them should be conducted	No evidence that this has been given attention
7. Sectors should be trained to assess the environmental impacts of activities pertinent to their mandates and be given user friendly guidelines on how to identify them, particularly in the short run before capacities are built.	On-going process

- **Value-addition introduced in PERECC**

161. PERECC has brought some value addition from the following perspectives:

- (i) participatory process that involved sector specialists and district staff to engage other stakeholders during the collection of information and data, and compiling the returns from the use of the budget tracking tool
- (ii) owing to the above, PEPECC has generated baseline understanding on several important aspects including ENR revenue by district, expenditure by private firms, NGOs, CBOs and communities by district; the list of active NGOs & CBOs by district; ENR enterprises, and strategies being planned to broaden revenue base.
- (iii) the scope gave prominence and visibility of climate change throughout the reports, including a stand-alone chapter on experiences of climate proofing in Rwanda
- (iv) capacity assessment both at sectoral and district levels
- (v) in-built strong element of capacity building as part of the review process
- (vi) providing evidence on distributional equity of public expenditure among districts
- (vii) demonstrating the relationship between vulnerability to environmental and climate change and poverty and showing the most affected districts
- (viii) bringing out strong emphasis, understanding and clarity that any review is superimposed on the public financial management systems and government's chart of accounts.
- (ix) disaggregating the data in Annexes by fiscal year and by district in excel sheets to allow future use in accordance with the ToR
- (x) linking key findings, messages and recommendations to the chapters to which they relate

- **Underlying reasons for the value addition in comparison with PEER**

162. There are many reasons to explain the value addition brought by PERECC, the top on the list being the following:

- (i) improved data sources that complemented the review, especially EICV 3 reports by NISR, list of projects supported by RLDSP disaggregated by district for the period 2008-2012, and improvement OECD/DAC database, particularly on marking aid for environment and climate change
- (ii) the PEI supported environmental facilitators in sectors and districts who owned the process with enthusiasm and commitment throughout the five month period
- (iii) clear guidance from the Director General, REMA, and from PEI Manager, Rwanda, with insistence on value addition from the start

- (iv) flexibility in time schedules which allowed all those involved in collecting data to go back when the need arose
- (v) institutional memory and understanding from previous assignments in Rwanda by the author of the policy, legal and financing architecture

4.11 Conclusion, Key message and Recommendation

- 163. Bringing all expenditure for environment and climate change from public institutions on one hand and from the non-state actors on the other is still a challenge. It was only encouraging that for the public institutions, the public financial management systems are improving over years but more effort is needed to address some of the aspects that scored a “D” in Table 3.5. It would be too optimistic to think that non-state actors can voluntarily and willingly declare their expenditures for environment and climate change without, first a legal framework; and second, a standardized format on how they have to fill it, and above all, an indication of what benefits or incentive they would get to declare their expenditures which can land into the hands of their competitors. It is for this reason that a strong recommendation has been given that future reviews should be restricted to public institutions.
- 164. Nonetheless it was because of the general improvement that it became possible to establish the share to MINIRENA, the execution rates, the sub-programme allocation, and the underlying reasons to the execution rates. The annual JSRs were also found a great input to the review process, implying that if the future ones can be well structured to ensure traceability and comparability of evidence across years, it would shorten the period for any review coming after many years.
- 165. It emerged that the share to MINIRENA which was studied to detail has been minimal, close to 1% for 2008-2012 actual expenditure, and less than what was established under PEER. The allocation to ‘Environment Protection’ as a classification of function of government across all sectors has registered higher annual incremental rates than the expenditure for the whole government. At the same time the government expenditure to environmental protection functional classification as a percentage of national expenditure has risen from 1.7% in 2009 to 2.5%. Further, Rwanda’s 0.89 % of environmental expenditure as a percentage of GDP is comparable to most developing countries.
- 166. The improvement in reflecting earmarked funds to districts particularly in 2011/2012 is a good step. It can be used by MINECOFIN to signal where the budget agencies should put emphasis in order to meet the national priorities.
- 167. The fact that public institutions contract the private sector, NGOs in the implementation of some interventions, to add their expenditures to that of government would invite ‘double counting’. It was not possible to establish what these institutions willingly on their own spend on environment and climate. Nonetheless, including no-state actors in the review has brought out some new evidence which can trigger new areas of investment e.g. capacity building, climate proofing initiatives by communities.

Message 4: The EDPRS 1 period has witnessed a pattern that the annual rate of increase in budget to environmental protection has been higher than that of the whole government, and the proportion of that expenditure has risen from 1.7% in 2009 to 2.5% in 2012.

168. **The following key recommendations are provided;**

- (i) Future PEPECC should be restricted to public institutions where data can quickly, independently and objectively be verified
- (ii) Establishing emerging best practices by non-state actors should be captured under commissioned studies rather than the public expenditure.
- (iii) The ENR sector should develop a generic basic outline on how to conduct JSRs across years to facilitate comparison across years, and to ease future reviews
- (iv) Future capacity building on environmental mainstreaming and climate proofing should combine the theory and the practice with the latter being delivered practically on specific case study activities in the field
- (v) MINECOFIN should maintain the increased allocation to the environment during EDPRS 2 implementation in order to maintain the momentum from EDPRS 1.

5: FISCAL DECENTRALIZATION FOR ENVIRONMENTAL MANAGEMENT AND CLIMATE CHANGE ADAPTION

5.1 Introduction

169. As the dictum goes: ***Think globally but act locally*** as the only way to operationalize the **subsidiarity principle**. It has been embraced by the GoR through the decentralization policy under its Law No. 04/2001 Article 9 whereby several activities were decentralized to districts, many of which can benefit environmental management and improving the resilience of the population against the climate change impacts [MINALOC 2012]. This is summarized in Box 5.1

Box 5.1: Districts and Towns' responsibilities relevant for environment and climate change

The District assumes the duties and responsibilities that are assigned to it by law and regulations, notably with regards to policy, administration, the economy, the welfare of the population and culture. The district is especially responsible for the following sectors:

- Agriculture, Animal Resources and Forestry
- Commercial activities in the District
- The development of small scale industries working within the District
- Sanitation in the District
- Water works and their maintenance
- Tourism and the environment
- Land use organisation and distribution of plots in the District
- Emergency services in the District

Source: Law No. 04/2001 Article 9

170. In addition, Rwanda's National Public Investment Policy 2009 calls for "balanced and integrated regional programmes, and optimal geographical allocation of public investments". Such investment should also be gender sensitive, pro-poor, pro-employment, pro-nature and distributed evenly across the regions. This chapter is very important for policy understanding because financial resources channeled through Rwanda Local Development Support Fund (RLDSF) that is an intermediary of funding districts have increased to 33% in 2011 from a mere 1.4% in 2002 [MINALOC 2012]. It also strengthens the choice of the theme for the entire review: ***Sharing expenditure for poverty reduction, equitable and inclusive growth***. The report can benefit deepening of decentralization in Rwanda. The aspects studied in this chapter sought to answer the following questions:

- How equitably have districts received budgets between 2008 and 2012 from the central government and donors for all projects in general and for those for environmental management, water and sanitation, and energy?
- How adequate and responsive is the fiscal decentralization formula to the diversity of environmental and climate change problems in the districts?

5.2 Fiscal Decentralization

171. There are 3 main flows of budget resources from the central government to districts, namely:

- A block grant from central government aimed primarily at meeting wage costs and some operational costs
- Grants earmarked for the delivery of specific public services
- Development funds from RLDSF

172. **In 2009/2010, block grant was allocated in line with formula discussed in PEFA of 2007.** For 2010/2011, the GoR reviewed the block grant allocation formula to make it needs based, and poverty sensitive. The weights for expenditure needs are shown below:

Population	20%
Poverty	30%
Number of sectors	50%

173. **Earmarked grants on the other hand are determined and operated through the budget process of the line ministry with oversight responsibility for the function concerned.** These grants are distributed to districts based on formulae and the exact formula in each sector is proposed by the relevant sector in consultation with local authorities and MINECOFIN.

174. **For the fiscal year 2011-2012, the existing formula presented below was used to allocate budget to districts.** However, the existing formula is under review. Also, special fund was allocated to Nyaruguru District, Ngororero and Bugesera Districts. Given that Kigali City is an entity that receives funds from RLDSF as a Local Government entity, and considering that applying equalization formula would double the effect on the entity as the latter is made of other beneficiary entities, its financial share (K) equals the total budget (B) divided by 31.

$$40\% * (B-K) \text{ Rwf} * p_i + 20\% * (B-K) \text{ Rwf} * s_i + 40\% * (B-K) \text{ Rwf} * w_i$$

P S W

175. Thus, the financial allocation was calculated using the above formula as follows:

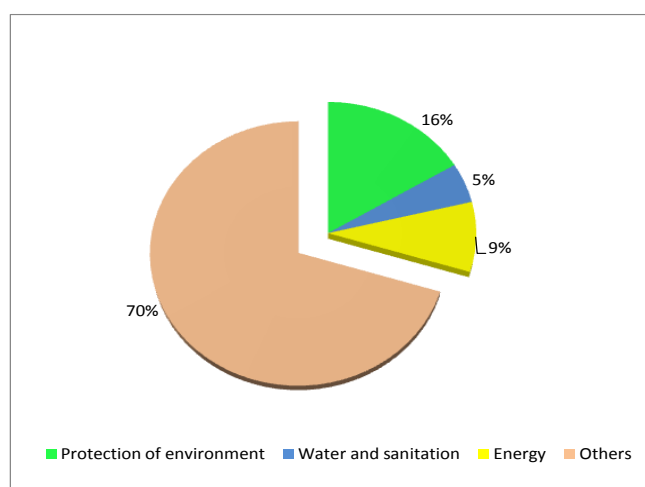
- **P** stands for the population of Rwanda, and **pi** the District population;
- **S** stands for the area of Rwanda, and **si** the area of the District
- **wi** stands for District welfare index and **i** and **W** the sum of the indexes
- **B** stands for the annual budget allocated to RLDSF

With: - Population = 40%
 - Welfare = 40%
 - Area = 20³⁴

³⁴ RLDSF Annual plan 2011-2012

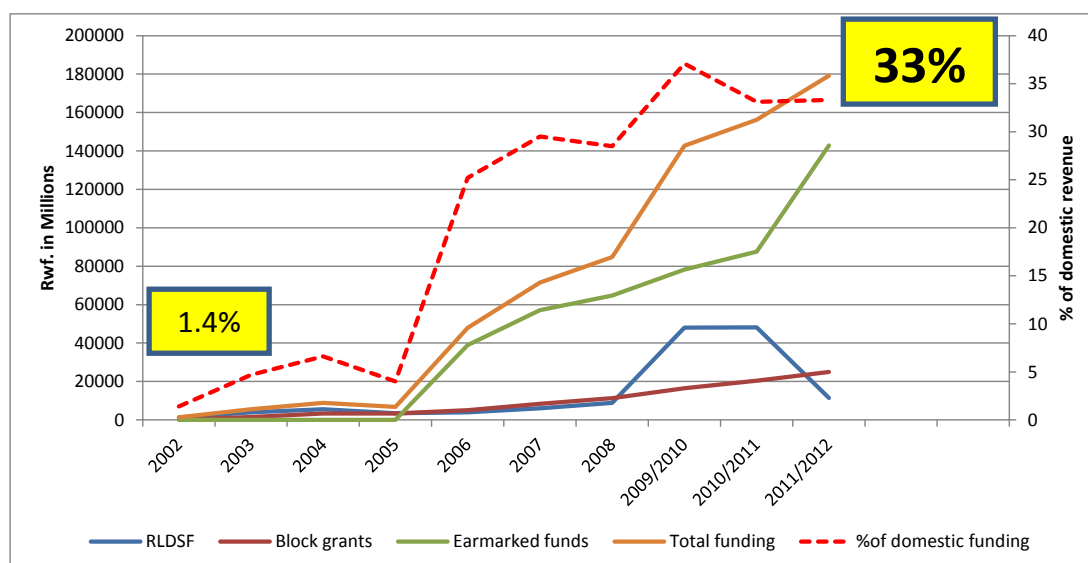
176. **While district access to RLDSF resources is formula driven, allocation of funds by donors is not; most donor assistance to districts through RLDSF is earmarked to specific districts (and therefore they simply use the mechanism of RLDSF).** It was shown in figure 1.3 that RLDSF was one of the sources of data for expenditure review. It is important source given that 33% of the government and donor funding pass through it. It was gratifying to find that the projects and their expenditures have been well compiled and accessible on the website of RLDSF. In the interest of this study, only three interventions were studied namely; (i) Protection of environment, (ii) Water and sanitation and (iii) Energy. Figure 5.1 shows how they have shared expenditure for the period 2008-2012, with environmental protection taking as high as 16%.

Figure 5.1: Proportionality of expenditures by type through RLDSF 2008-2012



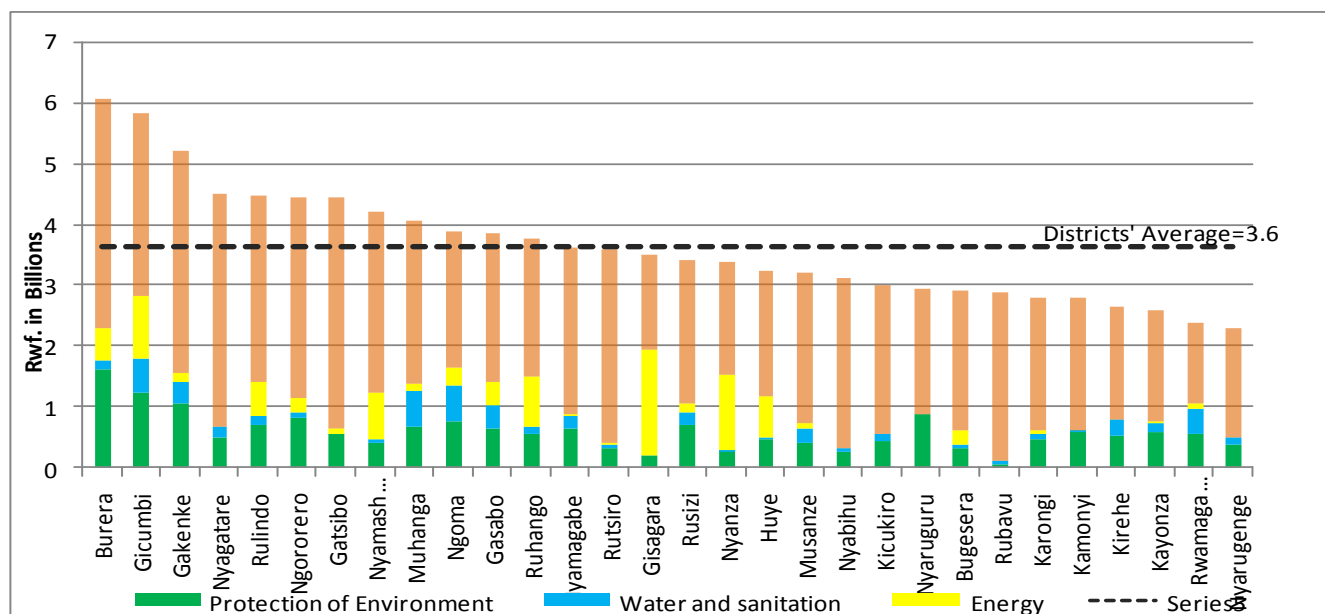
Source: RLDSF

177. **When one relates the above percentage for environment at national level, e.g. through DAD as was shown in Table 3.12 and Figure 3.10 in Chapter 3, one is inclined to believe that at the district level, environmental issues matter more than at higher levels.** The tentative policy implication is that it would be justifiable to allocate more share of expenditure for environment and climate change to districts than to Ministries. The analysis for more evidence continues. In terms of trend by source of funding and type, Figure 5.2 shows that they have generally increased since 2005.

Figure 5.2: Trends in fiscal decentralisation through RLDSF, 2002-2012

Source: RLDSF

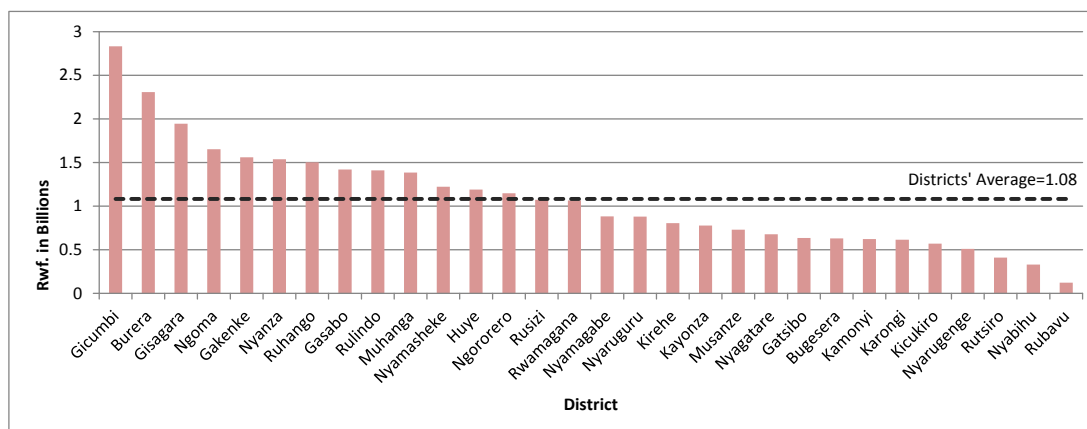
178. **In conformity with the theme of this report, the interest was to establish the distributional equity of all the expenditure across all districts for the five years.** That has been shown in Figure 5.3 where the average for all districts has been Rwf 3.6 billion. Overall the five districts of Burera, Gicumbi, Gakenke, Nyagatare and Ruhindo absorbed the highest share of expenditures in that period across all sectors through RLDSF while Nyarungenge, Rwamagana, Kayonza, Kirehe and Kamonyi got the least.

Figure 5.3: Distribution of all expenditures by category through RLDSF, 2008-2012

Source: RLDSF

179. In terms of the distributional equity for expenditure for environment, water and sanitation and energy which were specifically studied for the period 2008-2012, Figure 5.4 shows that overall, it was Gicumbi, Burere, Gisagara, Ngoma and Gakenke that took a lion's share. Rubavu, Nyabihu, Rutsiro, Nyarugenge and Kicukiro absorbed the least. The average for all districts was Rwf.1.08 billion.

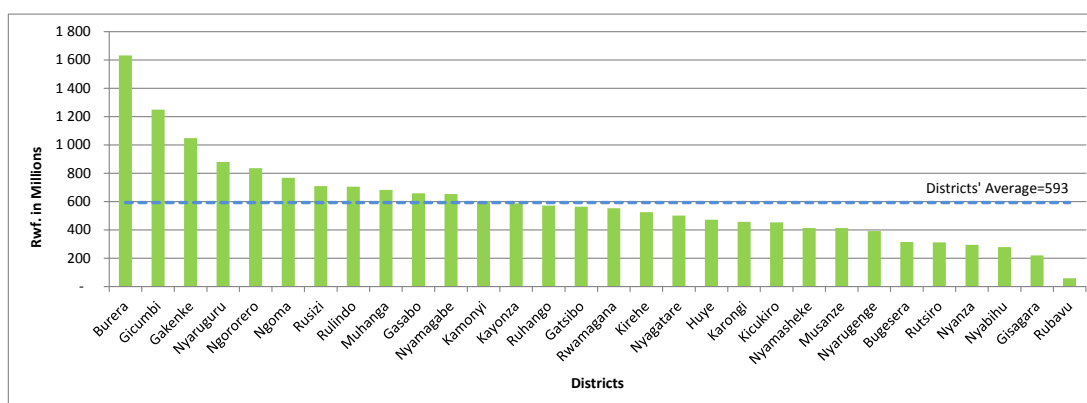
Figure 5.4: Distribution of expenditures for environment, water and sanitation, energy through RLDSF, 2008-2012



Source: RLDSF

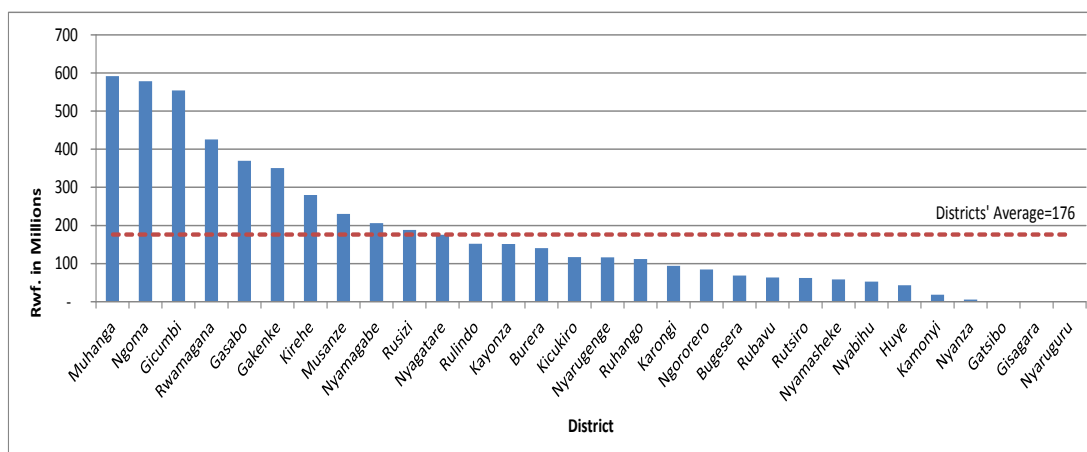
180. However, when the analysis for the distribution equity for only environmental expenditure was made, evidence showed that it was Burera, Gicumbi, Gakenke, Nyaruguru and Ngororero that absorbed the highest share. Rubavu, Gisagara, Nyabihu, Nyanza and Rutsiro absorbed the least [Figure 5.5]. The average across all districts was Rwf.593 million

Figure 5.5: Distribution of expenditure for environmental protection through RLDSF, 2008-2012



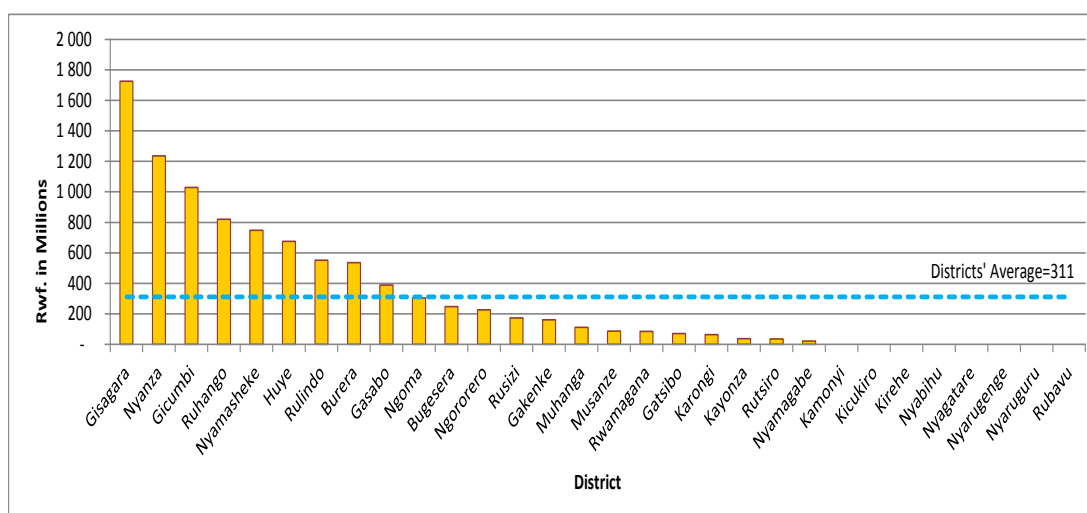
Source: RLDSF

181. When it comes to the distribution equity of expenditure for water and sanitation only, evidence in Figure 5.6 shows that it was Muhanga, Ngoma, Gicumbi, Rwamagana and Gasabo that absorbed the highest share. Nyaruguru, Gisagara, Gatsibo, Nyanza and Kamonyi either absorbed none or the least. The average for all districts was Rwf.176 million.

Figure 5.6: Distribution of expenditure for water and sanitation through RLDSF, 2008-2012

Source: RLDSF

182. With respect to energy, it was Gisagara, Nyanza, Gicumbi, Ruhango and Nyamasheke that absorbed the highest share as shown in Figure 5.7. Rubavu, Nyaruguru, Nyarugenge, Nyagatare and Rubavu absorbed nothing. The average across all districts was Rwf.111 million. It should strongly be observed here that perhaps the reason some districts did not spend for energy is either because they are already benefiting from past investments prior to 2008, or are accessing funding from other sources other than RLDSF or both. That equally applies to the evidence with respect to environmental expenditure and water and sanitation. Nonetheless the message is very clear: Perfecting government systems and using them for budget allocation would ease the work of not only MINECOFIN but also that of DPs in targeting pro-poor expenditures across all sectors and districts.

Figure 5.7: Distribution of expenditure for energy through RLDSF, 2008-2012

Source: RLDSF

5.3 Comment on the fiscal decentralization formula

183. **With regard to the fiscal decentralisation formula, by and large, it should satisfy at least five criteria.** They are:

- (i) *Simplicity* for understanding it among those it is meant to benefit
- (ii) *Independence* of the variables which should not overlap or relate to one another.
- (iii) *Intact* from being manipulated by understating or overstating the basis on which it is based
- (iv) *Verifiability* of the variables used objectively and independently by competent authority
- (v) *Rewarding* excellence and performance based on independent monitoring

184. **In the present form, the formula satisfies the first four criteria and it is not clear how it rewards the districts excelling in their performance to even strive for higher achievements.** Uganda and Tanzania which have annually carried out assessments of their local governments have three ways they rank the performance of districts ahead of allocating them funding. The criteria used include among others aspects related to environmental planning, budgeting and expenditure; gender mainstreaming; ability to improve revenue collection; and holding meetings for technical and local leaders on schedule according to the law to pass relevant resolutions and verifying whether value for money was achieved in infrastructure establishment. Uganda in particular uses the following performance reward structure:

- (i) **Reward:** That is, the planned activities for the previous year were achieved with a score of 70% or more, and districts get 20% additional budget allocation for subsequent year.
- (ii) **Static** That is, there was no change in performance since the previous year, and in any case, the score from the assessors ranged between 50% and 70% and the district's budget is neither increased nor reduced for the subsequent year.
- (iii) **Penalty** That is, there was decline in meeting set targets in the plan and to the assessors the score is less than 50%, in which case the district is penalised by reducing its budget for the subsequent year by 20%.

185. **However, the diversity of Rwanda's districts in terms of resource endowments, physical characteristics, accessibility and vulnerability to environmental and climate change impacts cannot be ignored.** It would only require more time, resources, multidisciplinary team and above all different terms of reference from those in Annex 1. That in mind, and going by the evidence so far generated, it would perhaps be more urgent to streamline the equitable sharing of expenditure and to monitor its impact on poverty reduction and beneficiaries than to constantly change the fiscal decentralisation formula.

5.4 Conclusion, Key message and Recommendation

186. **Decentralisation is a very good policy for taking services and decision making to the people directly affected by the local problems.** Evidence based on RLDSF's capacity to compile and manage expenditures through it over time points to the conclusion that it is now possible in Rwanda to build upon good practices of public financial management to motivate DPs to put their support on budget. That would ensure monitoring the due share to sectors and to the more needy geographical areas.

Message 5: Maintaining database of all funding by type and source over a period is a good investment for improving decision making for pro-poor targeting of public expenditure.

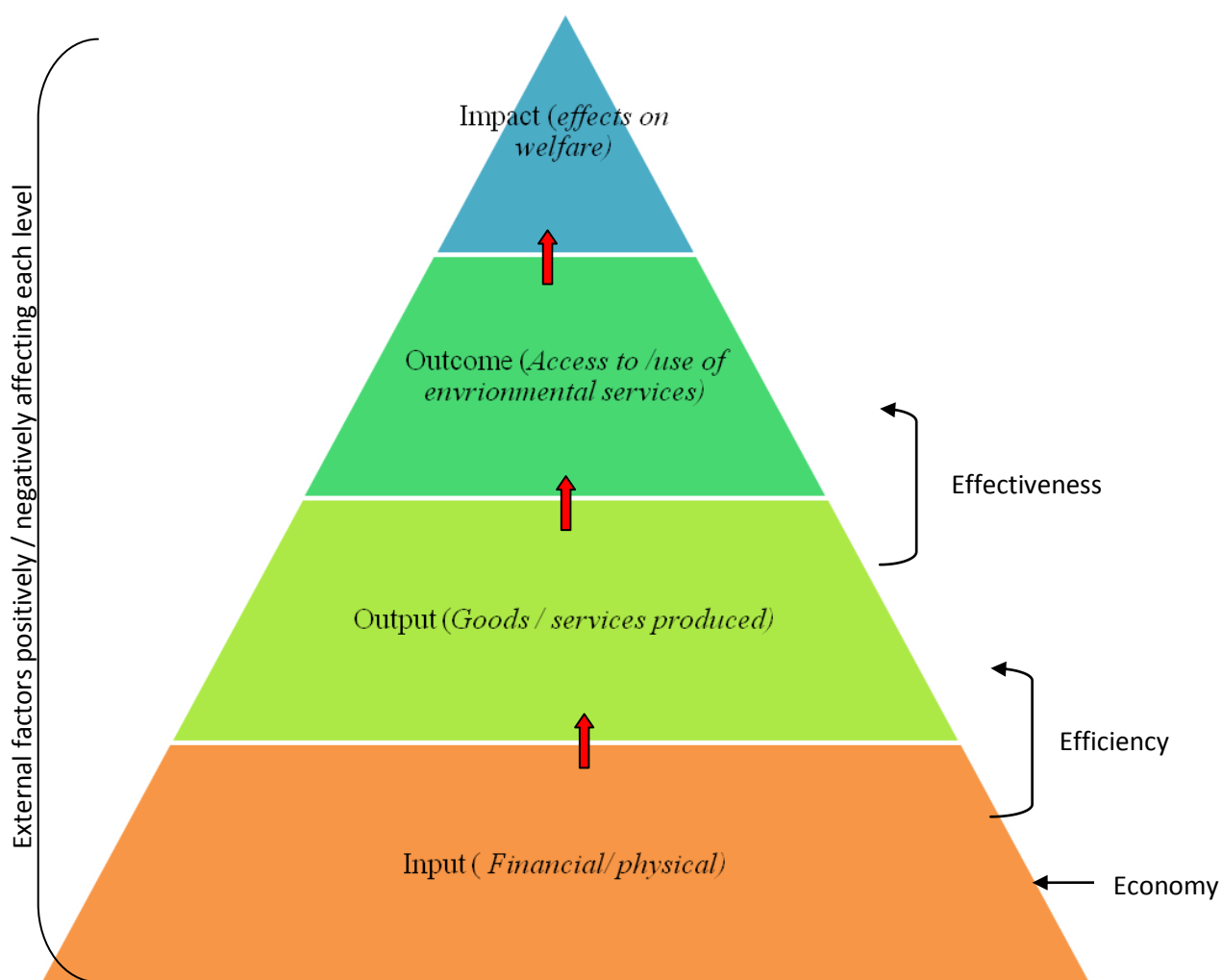
187. It is strongly recommended that Government should build upon the past achievement of RLDSF to disaggregate expenditure by source of financing, target beneficiary and interventions to give it additional responsibility to become the national repository for district level revenues.

6: ANALYSIS OF ADEQUACY, EFFICIENCY, EFFECTIVENESS OF EXPENDITURE AND IMPACTS ON POVERTY REDUCTION

6.1 Conceptual Framework

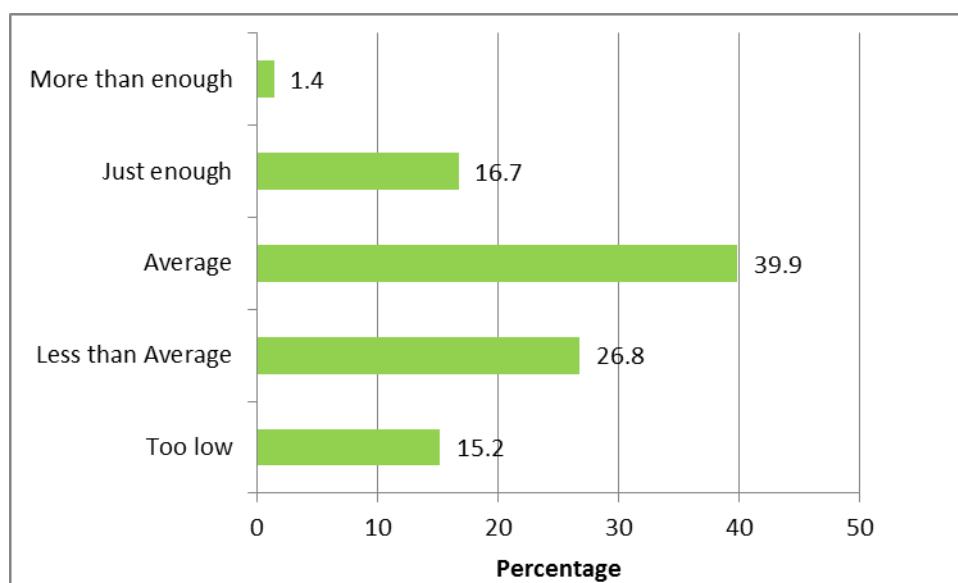
188. **Unlike in sectors like education and health where the GoR can continuously track the improvement of adequacy, efficiency and efficiency of expenditure, and objectively compare itself with other countries, it is not so easy in the case of environment and climate change.** This is because the multitude projects in environment and climate change target a wide range of issues such that they cannot have the same intended outcome. EDPRS 1 evaluation equally noted that it is only in health and education that well-functioning management information systems (MIS) that are improving sector management exist. The challenge that has to be addressed in the ENR sector is that of institutionalizing at best an integrated monitoring and evaluation that links its different sub-sectors because they differ in their outcomes. For example, one cannot expect the outcomes for forestry to be the same for mining or land.
189. **Figure 6.1 has been provided to conceptually help the sector understand how to analyse the vertical linkage among inputs, outputs, outcomes of their specific projects or programmes, bearing in mind that at best, they can only contribute to the achievement of higher level impacts of poverty reduction and improved functionality of ecosystems.** As it shows, the ability of the projects or programs to lead to each higher level in the vertical logic is subject to assumptions beyond the implementers, some of which may be unfavorable. The control of implementers gradually reduces upwards, and in any case, not beyond the outcome level. Beyond the outcome level [i.e impacts], there are many contributing factors from all sectors and discerning them by their relative contribution is not an easy task.
190. **It because of the above understanding of the logical framework principles that the author has use a pyramid to communicate that one's control over any indicator diminishes upwards.** For this reason, sectors should always advocate for enough inputs (including expenditure) that can allow them to be held **directly** accountable for the achievement of the output and outcome indicators.
191. **Furthermore, Figure 6.1 is the mirror image of the conceptual framework in Figure 3.2 in chapter 3 .**That helps to explain its relationship to PERECC and any other Public Expenditure Review[PER] since the principles of the public financial management systems and those of the logical framework are universally the same. With the above conceptual exposure, it is gratifying to note that Rwanda has various sets of data that permitted some general understanding of the adequacy, efficiency, effectiveness and distributional impact of expenditure. In addition, a rapid appraisal by the staff from sectors and districts enriched the evidence provided in this chapter.

Figure 6.1: Pyramid for establishing adequacy, efficiency and effectiveness of expenditure.



6.2 Adequacy and efficiency of expenditure.

192. **The evidence of the adequacy of expenditure to address environmental problems and to build the capacity of the citizens to be resilient to climate change is based on the rapid appraisal in which the districts participated, using a specially designed tool to enrich the comparisons among them.** Clearly as Figure 6.2 shows, the funding to environment and climate change to districts is not commensurate with enormous problems they have listed in Table 3.3 of Chapter 3 among others. Districts consider funding inadequate in relation to their local needs, some of which are either partially implemented or not implemented at all because of scarcity of resources.

Figure 6.2: Districts' assessment of adequacy of funding environment and climate change, 200-2012**[N=138]**

Source: Based on the Budget Tracking Tool

193. **Only Nyamasheke and Rulindo confessed that that they spent more than enough on a few of their interventions.** For Nyamasheke it was expenditure to access water. It spent Rwf 50 million in 2010/2011 and Rwf 1.045 billion in 2011/2012. It was therefore not a surprise that even under EICV 3, it was found that the percentage of Nyamasheke's households accessing water and sanitation was as high as 85.9% above the national average of 74.5%. For Rulindo, Rwf 200million each year over 2008-2012 period was more than enough for establishing a tourism site in Shyorongi. Overall, most districts considered their expenditure as having been average [39.9%] followed by less than average [26.8%]. The inadequacy of funding explains why many district' interventions in Annex 5 were not implemented to their satisfaction.
194. **The GoR has introduced Single Project Implementation Units [SPIUs] in the ENR sector to improve effective management project aid and to give value for money.** In a way that is improving ownership, accountability, and transparency and is reducing overlaps and transaction costs in implementing projects and programmes.
195. **Across the sector, Table 6.1 shows that progress was made in attaining the set indicators under the ENR sector.** A key observation found in the JSR reports is the practice to revise set targets. Whereas that is not bad in itself, it complicates the matching of expenditure by targets by fiscal years to assess the efficiency and effectiveness of expenditure in the sector. As the sector goes into EDPRS 2 implementation, it should formulate baseline indicators by sub-sector for all fiscal years of EDPRS 2 so that it becomes possible in the next review to establish which sub sector achieved greater outputs with less expenditure. The current practice of only reflecting baseline and target indicators for the plan period denies one an opportunity to measure efficiency and effectiveness.

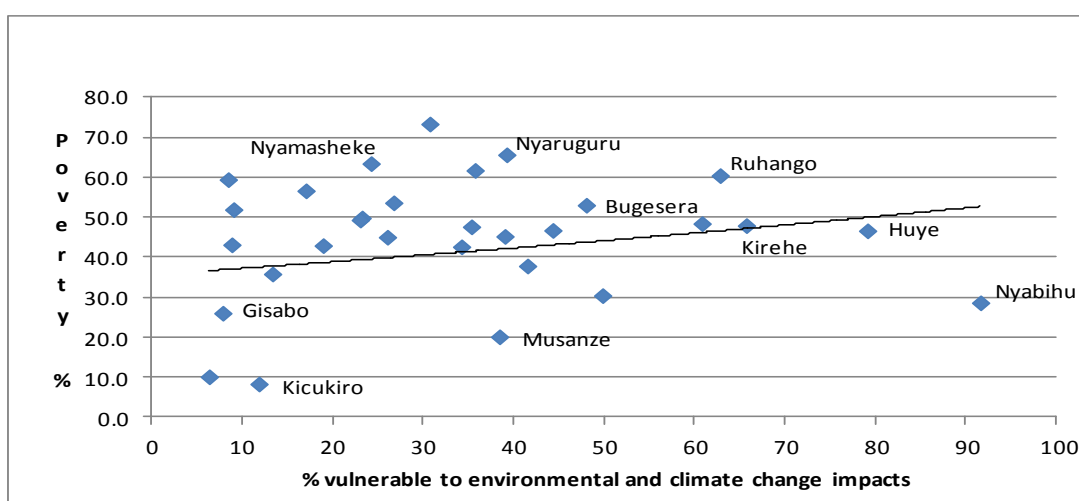
Table 6.1: Progress in meeting environmental targets of the ENR sector under EDPRS 1

	Baseline and year	Target 2012/2013	Actual 2010/11	
1. Forestry coverage (%)	20	22.7	24.5	Exceeded as 2012
1. Access to safe drinking water (% of population)	64	86	74	Still falling short
2. % of households with access to electricity	4	16	10.8	
3. Increase mining exports by 25%	72	106m	US\$180.4M	Target exceeded by 2012
4. Access to sanitation	64	86	74	Still falling short
5. Watersheds with water quantity	0	30%	30%	Target met.
6. Area protected to maintain biodiversity	8%	10%	10.13%	Target met
7. No. of land titles issued	8000	7,000,000	4,200,000	Partially met

Source: JSR Reports 2008-2012

6.3 Effectiveness of expenditure

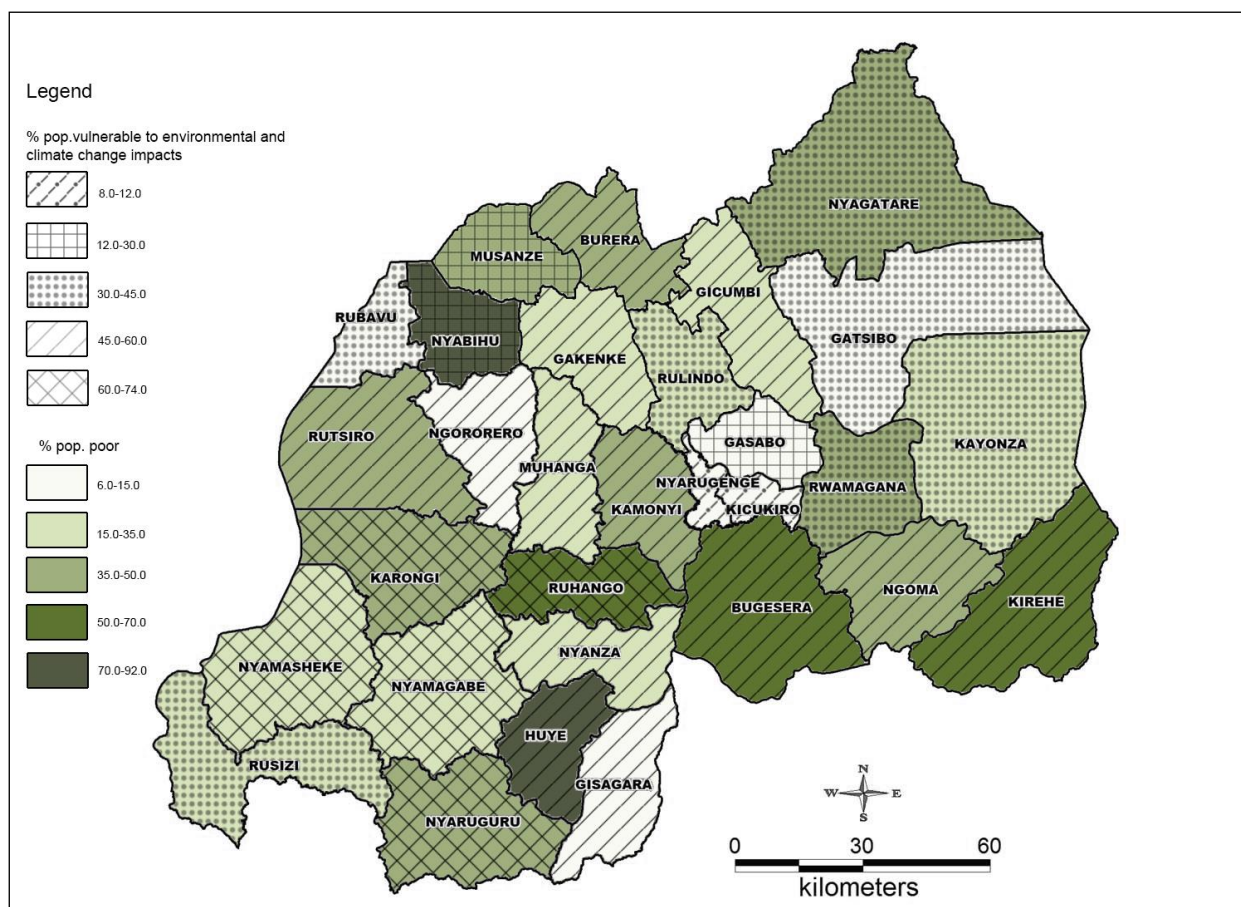
196. General evidence on effectiveness of expenditure was deduced from EICV 3 results that were also collected and summarized according to the districts by National Institute of Statistics. Figure 6.3 shows that vulnerability to environmental and climate change impacts worsen poverty³⁵. The main impacts household faces are already listed in section 1.4 of Chapter 1. The same evidence is shown differently in Figure 6.4 by overlaying poverty and vulnerability together to show the districts which are worst hit. In their order the top 6 or 20% of all districts are Huye, Ruhango, Nyabihu, Kirehe, Bugesera and Nyaruguru

Figure 6.3: Vulnerability to environmental and climate change impacts and poverty go hand in hand.

Source: Based on EICV 3

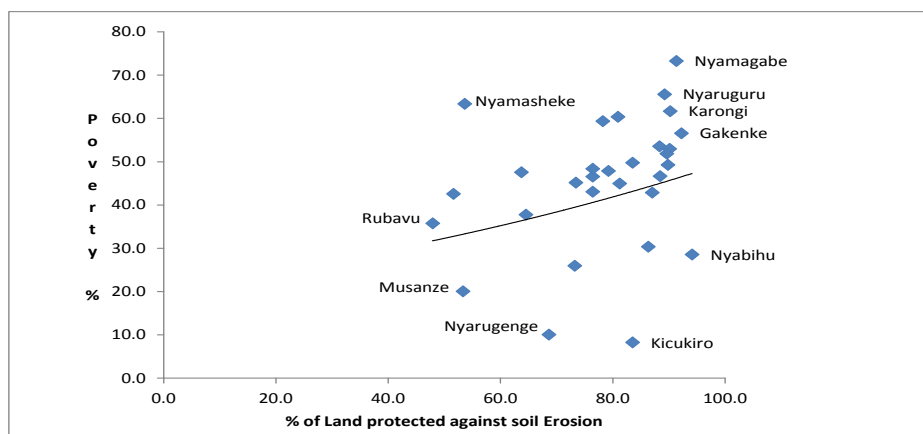
³⁵ In this report both percentages for 'extremely poor' and 'not extremely poor' under EICV3 were combined.

Figure 6.4: Mapping vulnerability to environmental and climate change impacts and poverty in Rwanda

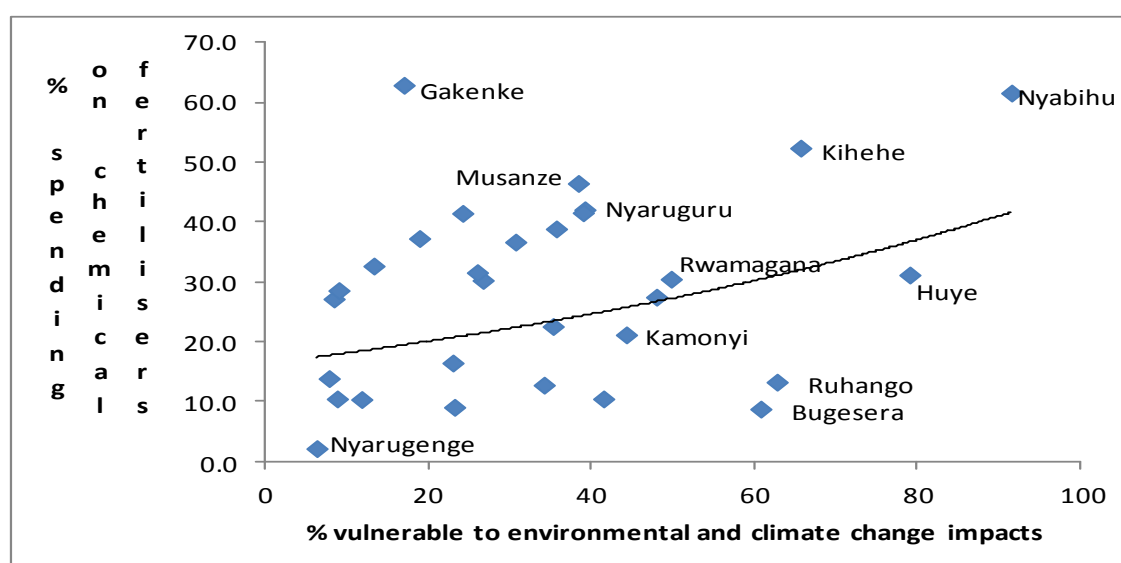


Courtesy: Arch. Conrad Kazoora Goodman, based on EICV 3

197. According to a recent study, Rwanda is still showing “Red”, against the MDG 7: on ensuring environmental sustainability and MDG 1: on fighting poverty and hunger. [Action Aid 2012]. “Red” means it will not be able to meet those MDG targets by 2015.
198. Based on findings from EICV 3, the poor households have the propensity to protect their livelihood asset (land) against soil erosion [Figure 6.5]. Furthermore, the households that are vulnerable to environment and climate change impacts are more or less likely to spend highly to protect their land using chemical fertilizers.[Figure 6.6]

Figure 6.5: Poverty induces propensity to protect land against soil erosion.

Source: Based on EICV 3

Figure 6.6: Households vulnerability to environmental and climate change impacts spend highly on chemical fertilisers

Source: Based on EICV 3

199. Further evidence showed that low access to sanitation and low access to energy and poverty go hand in hand as shown in Figures 6.7 and 6.8 respectively. The African Development Bank which followed the same analysis for energy in particular, equally reported that low access to electricity is one of the most pressing constraints to economic growth and urban development [ADB 2012].

200. It therefore did not come as a surprise that the bank signed an agreement worth US\$ 45.1 million [Rwf 26.9million] to scale up energy access projects in the country. The projects will connect 25,438 households 179 schools 29 health centers and 25 sector administration offices to the grid³⁶

Figure 6.7: Low access to improved sanitation and poverty go hand in hand

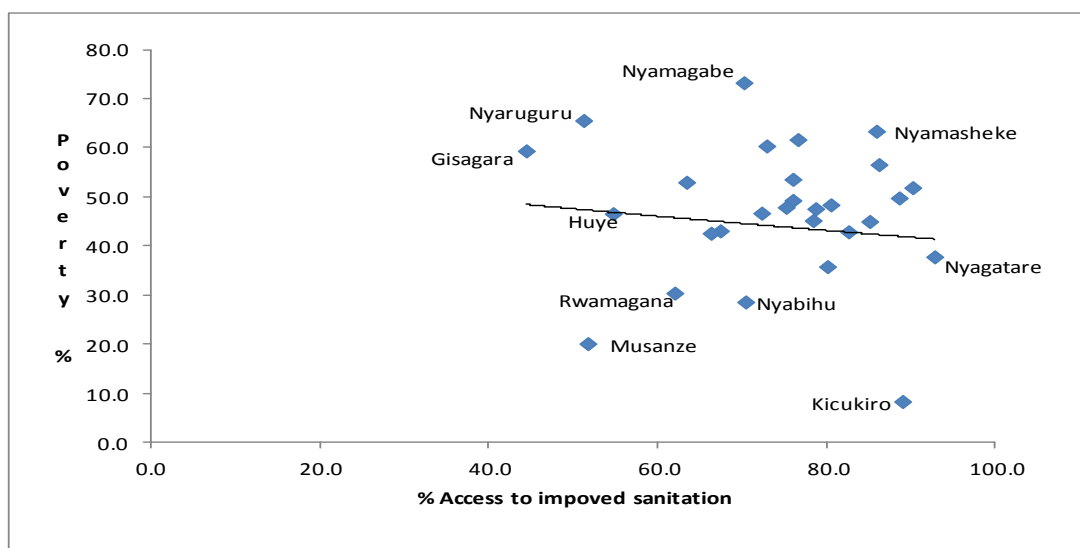
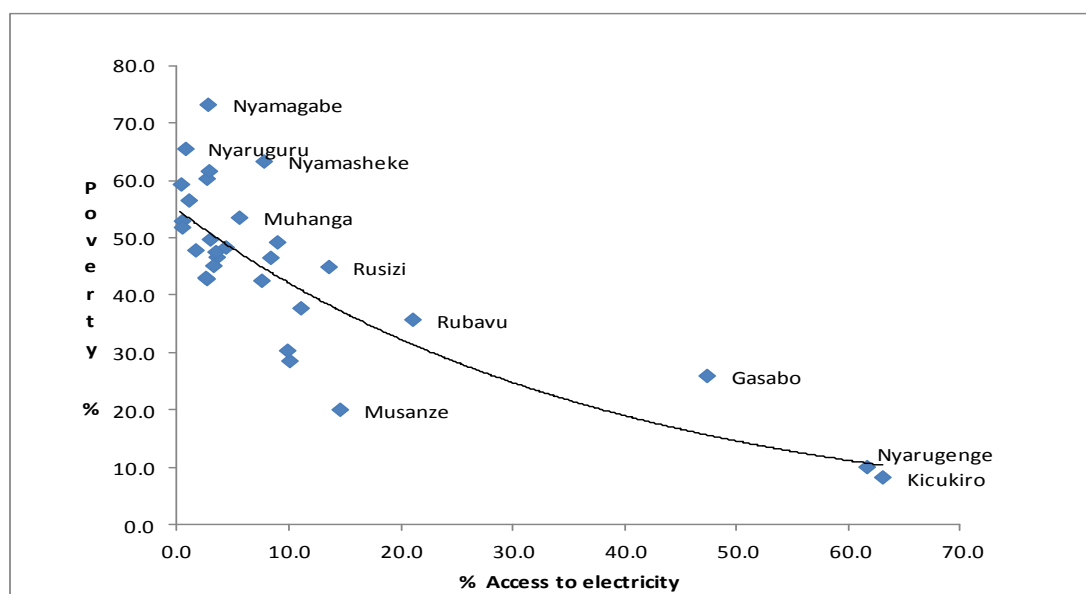


Figure 6.8: Low access to electricity and poverty go hand in hand



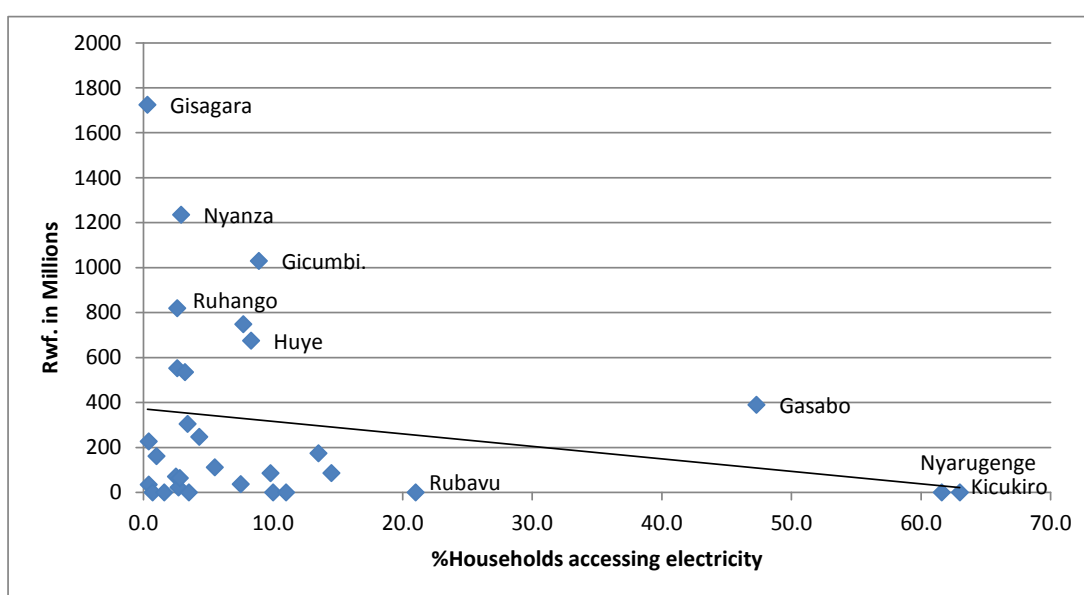
Source: Based on EICV 3

201. When the expenditure for energy, water and sanitation and protection of the environment through RLDSF were related to EICV 3 data by district, the following indicative pointers came out.

³⁶ Reported in the New Times, Rwanda's Daily News paper of 7th August 2013

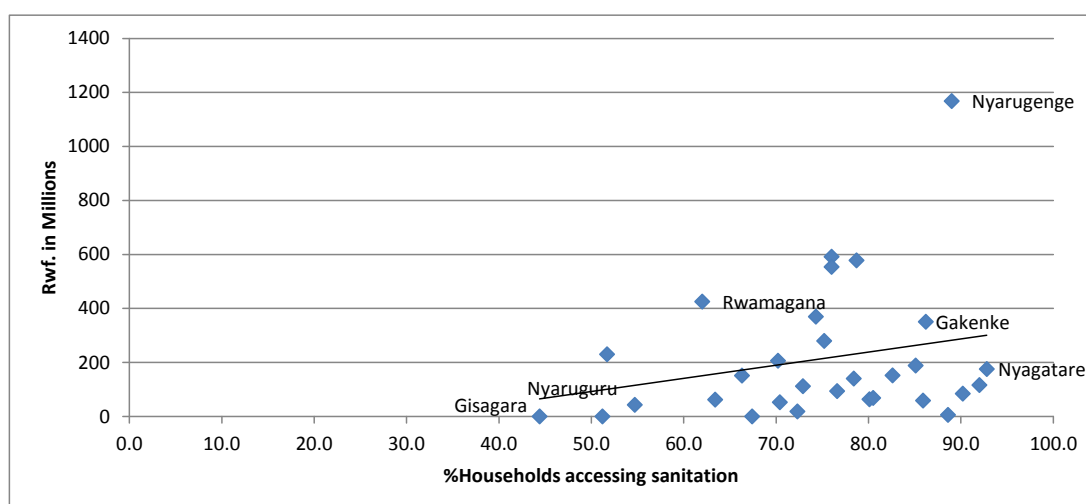
- (i) Districts with **low** access to energy spent **more** of their expenditure to access energy as shown in Figure 6.9, a finding that relates well with Figure 5.7 in Chapter 5.
- (ii) Districts where households have **more** access to water and sanitation, are likely to spend **more** to maintain that infrastructure as seen in Figure 6.10 ,a finding that relates well with Figure 5.6 in Chapter 5
- (iii) However, there was no pattern to show the interdependence between vulnerability to environmental and climate change impacts to expenditure for environment as shown in Figure 6.11.

Figure 6.9: Districts with low access to electricity increase their expenditure for it through RLDSF



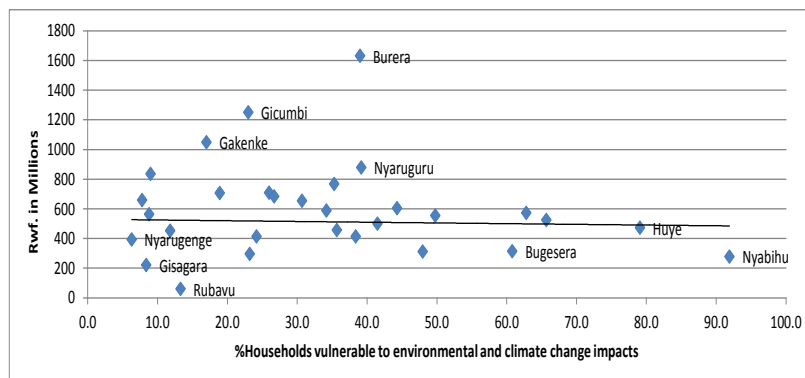
Source: RLDSF and EICV 3

Figure 6.10: Districts with more households accessing sanitation spend more for water and sanitation



Source: RLDSF and EIV 3

Figure 6.11: Districts' expenditure for environmental protection not as responsive to degree of vulnerability.



Source: RLDSF and EICV 3

202. The above patterns have some credibility given that African Development Bank has funded the GoR in energy expansion using similar analysis in Figure 6.8 Further, it is also a known fact that when one acquires an asset, one has to prepare for recurrent expenditure consequences of maintaining that asset, thus explaining why districts with higher access to water and sanitation spend relatively higher than those with less access as shown in Figure 6.10. That also brings into focus the benefit the government would derive if all expenditure was on budget and using government systems.

6.4 Unit Cost Analysis

203. **A sample review of the interventions for environment among districts funded under RLDSF 2008-2012** showed that they varied by district mainly because districts are neither uniform nor equally accessible by service providers. With that in consideration, suffice it to mention for example that the unit costs for say radical terraces funded under RLDSF for Nyagatare, Rulindo and Kayanza ranged between Rwf 84,700 and 121,800 per hectare. Institutionalising the concept of unit cost analysis in Rwanda for comparable interventions needs more study and focus. Unit costs for service delivery in mining cannot be compared with those in forestry because they cannot be linked to same outputs or outcomes. The above notwithstanding, Rwanda can make a study on common user items like stationery, fees for procuring certain services, office equipment and many others. For example, the Government of Uganda has published the price range of common user items to improve value for money in procurement following a study by the Public Procurement and Disposal of Assets Authority.

6.5 Social benefits versus marginal social costs on environment interventions

204. The findings in this section are based on the funding through RLDSF and the application of the budget tracking tool. First, from RLDSF funding, it was established that districts like Muhanga, Ngoma, Gicumbi and Rwamagana which spent highly on water and sanitation between 2008 and 2012 have some benefits to show. They all rank above the national average of 74.5% in access to water and sanitation according to EICV3.
205. Second, from budget tracking tool, it was found that some interventions at district level absorbed such low budgets that one is left wondering whether the social ,environmental and economic benefits are not outweighed by the social costs including the opportunity cost of labour .For example, water and sanitation by UBUZIMA BWIZA cooperative in Rwamagana ranged between Rwf.150,000 and 230,000 and establishment of tree nurseries by Dukomezimihigo cooperative in Ngororero ranging between Rwf.356,000 and 215,000 .Nyamasheke as a district also spent only Rwf.110,000 in 2010/2011 to protect the environment. It did not come as surprise therefore that some districts observed that sometimes, the unpredictable climate change impacts reverse the benefits from some of their investments. This was reported by Gicumbi, Rusizi, Rulindo as shown in Table 3.3.
206. The main policy implication from the revelations (iv), (v), (vi) is that to the extent possible, funding by FONERWA to various stakeholders should demonstrate one or a combination of the following eligibility criteria:
- (i) Minimum scale to enable attaining of economies of scale
 - (ii) Evidence of other sources of expenditure to leverage the support from FONERWA in order to build in strategy for exit of FONERWA's funding
 - (iii) Partnerships among implementing stakeholders to leverage capacities and share risks
 - (iv) Likelihood for the supported intervention to generate revenue, and/or clear indication of costs and anticipated benefits
 - (v) FONERWA should consider having a window of financing at short notice when there is climate change related disaster

6.6 Strategies to improve efficiency and effectiveness of expenditure

207. There are many steps the GoR has taken to improve efficiency and effectiveness of expenditure. It has embraced DOL, established Single Project Implementation Units, institutionalised public-private partnerships in service delivery and held its leaders accountable under the *imihigo* .Above all, its efforts against corruption have been strong and consistent.

6.7 Conclusion, Key message and Recommendations

208. The various data sources have shown how the targeting of expenditure in Rwanda would benefit from using the government systems. It emerged that nationwide surveys like EICV 3 can contribute to rationalizing allocation of expenditure. The likelihood that Rwanda may not attain the targets for MDG 7 and MDG 1 by 2015 among all MDGs has also been mentioned.

209. Further, the failure to set performance targets by subsector under MINIRENA by each fiscal year makes it difficult to assess the incremental benefits associated with the expenditure. It is also unrealistic to expect establishment of the direct contribution of environmental expenditure on high level impacts like human well fare at household level under such a review. The poverty rate fell from 56.7% in 2005 to 44.9% in 2010/2011 but as explained in section 6.1 using the conceptual framework in Figure 6.1, it is the performance of all the sectors that have **contributed** to the fall in poverty rate.
210. It is for this reason that it was pointed in Chapter 1 that it would be advisable for JSRs and PERECC to be complemented by commissioned studies to broaden the understanding of the cause and effect on case studies of selected interventions. Nonetheless, the efforts the government has put in place offer strong foundation to improve efficiency and effectiveness of expenditure in future.

Message 6: Targeting of expenditure and measuring its long term impacts on poverty reduction, well-being at household level would be possible if commensurate resources are provided for consistent longitudinal data gathering.

211. It is therefore recommended that once ENR makes a new strategy, it should include a component for systematic data gathering and creating databases that can be periodically updated to facilitate objective assessment of expenditure on well-being over long time.

7 . SEMI-AUTONOMOUS AGENCIES AND THEIR VALUE ADDITION TO ENVIRONMENTAL AND CLIMATE CHANGE FINANCING.

7.1 Value addition in mobilizing and using financial resources

212. **Environment management issue in Rwanda took centre stage in 2005 when the government enacted Organic Law No.4/2005 determining the modalities of protection, conservation and promotion of environment.** In accordance with Article 65(1) of the same law the government established Rwanda Environment Management Authority (REMA) under Law No 16/2006 determining its organisation, functioning and responsibility.
213. Among others, some of the functions of REMA are:
- (i) to implement government environmental policy
 - (ii) to advise the government on policies, strategies and legislation related to the management of the environment under international conventions
 - (iii) to take stock and conduct comprehensive supervision of the environment and to prepare the state of the Environment Report every two years
 - (iv) to examine and approve Environmental Impact Assessment Report
 - (v) to ensure adequate monitoring and evaluate development programmes in order to respect instructions on environment in the preparation and implementation of all development projects
 - (vi) to render advice and technical support where possible to entities engaged in natural resources management and environmental conservation
214. **Further, Organic Law No. 4/2005 provided for the establishment of the National Fund for Environment, abbreviated as 'FONERWA' in French with responsibility for soliciting and managing financial resources**³⁷. It is gratifying that Rwanda has already established and broadened the above fund as National Fund for Environment and Climate Change under Law No.16/2012 (See Box 7.1).

Box 7.1: Functions, scope of National Fund for Environment and Climate Change [FONERWA]

The main responsibilities of FONERWA are:

- mobilizing and managing resources used in activities aiming at protecting environment and natural resources
- mobilizing and managing funds to be used in the fight against climate change and its impacts
- to support public organs, associations and individuals aimed at protecting the environment, research, as well as managing climate change.

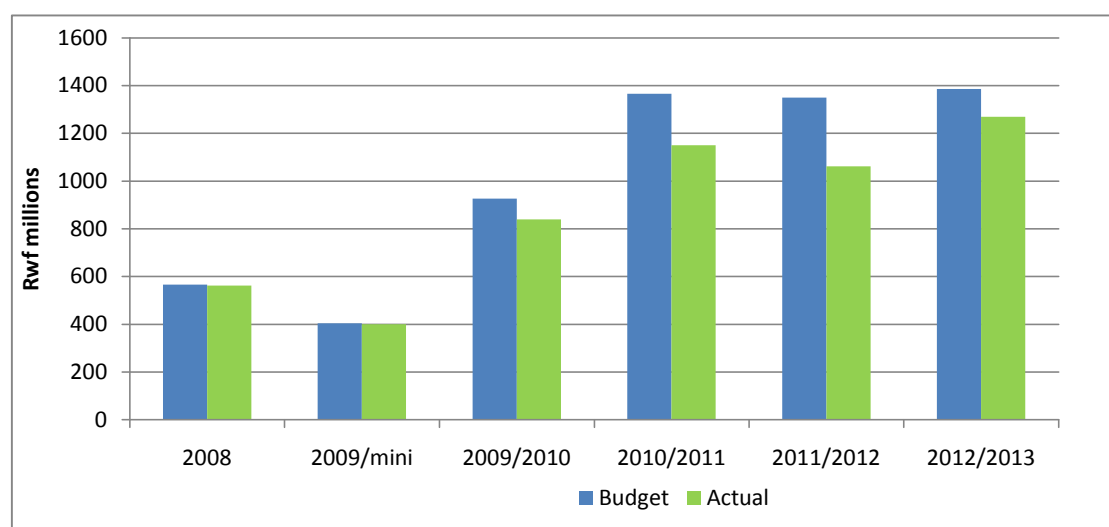
It is supervised by the Ministry in charge of environment and climate change, but it has a management committee determined by the Prime Minister whose membership has to include at least 30 female.

Source: Law No.16/2012

³⁷ Under Article 65(2) of Organic 4/2005

215. **In addition to REMA, the GoR recently established Rwanda Natural Resources Authority (RNRA) under Law. No. 53/2010.** It also has a legal personality, administrative and financial autonomy and governed in accordance with laws governing public institutions. The mission of RNRA is to lead the management of promotion of natural resources composed of lands, water, forest, mines and geology. Key among its functions are to:
- (i) implement national policies, laws strategies, regulations and resolutions pertaining to promotions and protection of natural resources
 - (ii) advise the government on conservation of natural resources and investment opportunities
 - (iii) rehabilitate and conserve natural resources damaged in the country
 - (iv) supervise and follow up activities relating to proper use of natural resources³⁸
216. **The value addition of REMA which has existed longer than RNRA has been analysed from 2 perspectives, namely (i) improvement of the execution rates of expenditure and (ii) attracting funding and managing projects for environment and climate change.** As Figure 7.1 shows, there is no doubt that REMA has attracted growing funding from government since it was established. In addition, its expenditure rates have ranged between 79% in 2011/12 and 99% in 2008. Objectively however, that achievement can only be taken if one looks at the situation “before” it was established. According to CFAA Report³⁹, the development budget for environment was Rwf 1,538 million, out of which only Rwf 90 million was spent, translating to only 5.9% execution rate. So, the establishment of REMA has been beneficial to the government in absorption and utilization of funds under the sector.

Figure 7.1: Trends for budget and expenditure by REMA 2008-2013



Source: DAF/REMA

³⁸ According to Article 3 of Law No.53/2010

³⁹ Republic of Rwanda [2005] Country Financial Accountability Assessment Report, page 32

217. **Secondly Table 7.1 shows that REMA's projects contracted within the period 2008-2012 have been on the rise generally.** Another important fact is that the establishment of FONERWA which attracted £22.5 million for all stakeholders in 2013 is attributed to REMA's efforts to operationalise it in accordance with Organic Law No.4/2005.

Table 7.1: Project funding through REMA starting within the period 2008-2012

Year	2008	2009/2012	2010/2011	2011/2012
Amounts (US\$)	5,614,071	6,779	2,123	16,236,630

Source: DAF at REMA

218. **Finally but not the least, REMA has proactively improved its staffing to deliver on its mandate and to improve value addition to the climate change.** To that end it introduced a Directorate of Climate change and international obligations and Directorate of Legal Affairs in 2010. Practically, the working relationship between REMA and its Ministry MINIRENA has been complementary and beneficial to the sector and other sectors, especially in information and knowledge sharing, sector planning and policy advocacy. It has also implemented some projects with districts to enhance their capacity where resources have permitted. However, evidence in Table 3.3 in Chapter 3 to the effect that districts still have a lot of capacity gaps cannot go undocumented. REMA should support districts to establish environmental management committees and make them functional.

7.2 Conclusion, Key message and Recommendations

219. **There is no doubt that REMA has now exerted itself fully on the stage to play the mandate for which it was established, and to improve service delivery in environmental and climate change issues.** However, according to many Districts' returns summarized among others in Table 3.3 in Chapter 3, the demand to translate policy provisions on the ground among the immediate custodians of the environment cannot go undocumented. The capacity gaps still exist. Yet the amount of earmarked resources has not been commensurate to the challenges at hand at district level.

Message 7: Government efforts to establish semi-autonomous government agencies in the ENR sector has helped it to deliver on its national and international environmental commitments and to improve the visibility of the sector to attract funding that is already benefiting all stakeholders.

220. A key recommendation is that REMA should consider expanding its structure to include a Directorate for coordinating District Level environmental interventions.

8: INSTITUTIONALIZING CLIMATE PROOFING ACROSS SECTORS IN RWANDA

8.1 Emerging best practices of climate proofing in Rwanda

Traditionally, communities globally have always adapted to climate change, albeit with varying degrees of success. Similarly, Rwanda has some examples of climate proofing but they have not been popularized as such. To formalize and institutionalize them is the only way to ensure that they start to appear on policy agenda, including securing the necessary financing, capacity building and legal backing where need be.

221. Climate proofing is a shorthand term for identifying risks to a development project, or any other specified natural or human asset, as a consequence of climate variability and change, and ensuring that these risks are reduced to acceptable changes implemented at one or more of the following stages in the project cycle: planning, design, construction, operation and decommissioning.
222. **This case study therefore explores in brief experiences within Rwanda of climate proofing development which need to be supported during the implementation of EDPRS 2.** The same examples provide a window for potential support under the recently formed FONERWA. As already highlighted issues of climate change are not sector specific, but rather multi-sectoral, cutting across virtually all functions of government to which MINECOFIN allocates budgets. It has already been stated in Box 3.2 ministries responsible for finance have bigger stake than before because of the cost implications of climate change.
223. Under its program of the Strategic Plan for the Transformation of Agriculture Phase II (PISTA II) Rwanda deliberately included an output on *“pilot risk mitigation products such as savings facilities tailored to the needs of the rural population and micro-insurance programme, both for crops in areas covered by weather stations and for livestock”*⁴⁰ [MINAGRI 2009].
224. **Agriculture is the key economic activity in Rwanda, employing the biggest percentage of the labour force in rural areas, and contributing 33% to GDP.** Smallholder farmers countrywide are subject to crop damage caused by a variety of adverse weather conditions. Amidst weather uncertainty, they are excluded from access to credit from banks. Accordingly, MINAGRI partnered with two renowned agriculture intermediaries, Micro-Ensure and Syngenta Foundation for Sustainable Agriculture in 2011 and 2012 respectively through a memorandum of understanding. Micro-Ensure and the IFC’s Global Index insurance Facility Programme are working together to bring affordable, flexible and responsive weather index insurance to low-income farmers in Rwanda. Initially, the insurance covered the traditional cash crops (tea and coffee), and later the crops under the Crop Intensification Programme (CIP), namely Irish potatoes, maize, rice and beans that many poor people grow for food security.

⁴⁰ See page 80

225. **As of mid-2012, 6208 maize and rice farmers have been covered with weather station and satellite index products in the country.** The project plans to insure up to 24,000 farmers by the end of December 2013. Micro Ensure works in partnership with microfinance organizations, rural banks and savings and credit societies. The weather indexed insurance is sold as part of a loan, and payouts from the insurance automatically pay off the loan. The loan can also be purchased by paying out directly premium to the insurance company as well. MicroEnsure is working on the ground with Urwego Opportunity Bank⁴¹, MINAGRI, the Rwandan Meteorological Agency and local insurance companies particularly Sonawara and Sores. Syngenta Foundation for Sustainable Agriculture mentioned above has also launched a livestock insurance called “*Hinga Urishingiwe*” project, literally meaning “safe farming”.
226. **The agriculture insurance is expanding at a considerable pace whereby in 2013 season, 20236 farmers were insured against drought and excessive rainfall in Nyanza, Huye, Nyamagabe, Gisagara, Nyaruguru, Karongi, Ngoma, Kirehe, Muhanga and Musanze districts.** The success of agriculture insurance cannot be perceived only in the above number of farmers accessing it but also in the payouts made as compensation for losses incurred. In 2012, a shortfall of 15% in bean harvest in Huye District translated into over Rwf.4 million to 1688 farmers.
227. **Further still, developing or researching a selection of high yielding and climate appropriate crop varieties focused on diversification, intensification, storage, and reducing post-harvest losses broadens the poor’s resilience against the vagaries of climate change.** These have for example preoccupied Rwanda Agricultural Board [RAB]⁴². The CIP has Rwf 9.6 million allocated to RAB through MINAGRI. As already mentioned in chapter 3, developing weather resistant crops was listed as a priority area under Rwanda’s second climate change communication to UNFCCC. For the period 2011-2011, Rwanda has been food secure. RAB will need to take advantage of its Integrated Agricultural Research for Development based on innovation platform approach⁴³ to do even better. In this approach, stakeholders (farmers, scientists, traders, local authorities, NGOs and the private sector) are becoming increasingly involved in research process from priority setting and technology development to technology transfer.
228. **Despite the above achievements so far, the remaining challenges need to be addressed, especially investment in weather data infrastructure, making insurance affordable so that farmers do not revert to subsidies and building confidence in the insurance product.** No doubt, weather indexed insurance provides FONERWA yet another opportunity to formally partner with the active institutions in Rwanda so that they can perfect and popularize crop insurance as one of their own products in future.

⁴¹ Apparently this is a subsidiary of Opportunity International, created in 2005 by MicroEnsure, as the world’s first stand alone micro insurance agency.

⁴² According to Annual Action Plan 2012/2013

⁴³ That is a fundamental shift from the traditional research extension linear processes.

229. **Climate proofing was found to extend to other interventions and sectors although at policy level, it has not been directly marketed and popularized as such.** For example, still within Agriculture, the government has made an irrigation Master Plan to improve irrigation given that rainfall reduces from the west to the east [MINAGRI 2010]. Part of the financing is to be through introduction of water user fees to complement other expenditure from the establishment of an Irrigation Development Trust Fund [IDTF] [ibid, page 141]⁴⁴. Under PEI, farmers in Gicumbi District were also supported in rain harvesting for crop production, a practice that is being replicated in Muhanga District with support from Sida.
230. **Under Industry and Commerce, Rwanda has shown commitment to climate proof industrialization by relocating the industrial park from the flood prone areas, using part of Rwf 2.887 billion budget⁴⁵.** In addition, part of the budget is to be used to conduct a feasibility study for biodegradable plastic industry. Rwanda's fight against non-biodegradable polythene bags that are environmentally unfriendly has widely been reported regionally and globally. As it rolls out the establishment of other industrial parks, it will be strategic to build a culture of Corporate Social Responsibility [CSR] among the private stakeholders particularly with respect to the conservation of environment, protection of staff from occupational hazards, and supporting them to have their products certified to meet the demand for green consumerism.
231. **It was gratifying that Rwanda has already taken the route of Cleaner Production.** Evidence from adopting this practice so far points to the conclusion that it is a practice which is financially rewarding. The cost savings of implementing resource efficiency and cleaner production (beverage, food, textile, chemicals, etc.) are shown in Table 8.1 for the 12 firms that consistently adopted efficiency practices with respect to water, energy and materials. The Resource Efficient and Cleaner Production Centre [RECPC] should use this example to reach out to other firms through a well-designed and targeted communication strategy.

Table 8.1: Cost savings by adopting cleaner production

Year	2009/2010	2010/2011	2011/2012
Savings in US\$	60,000	74,000	340,000

Source: MINICOM

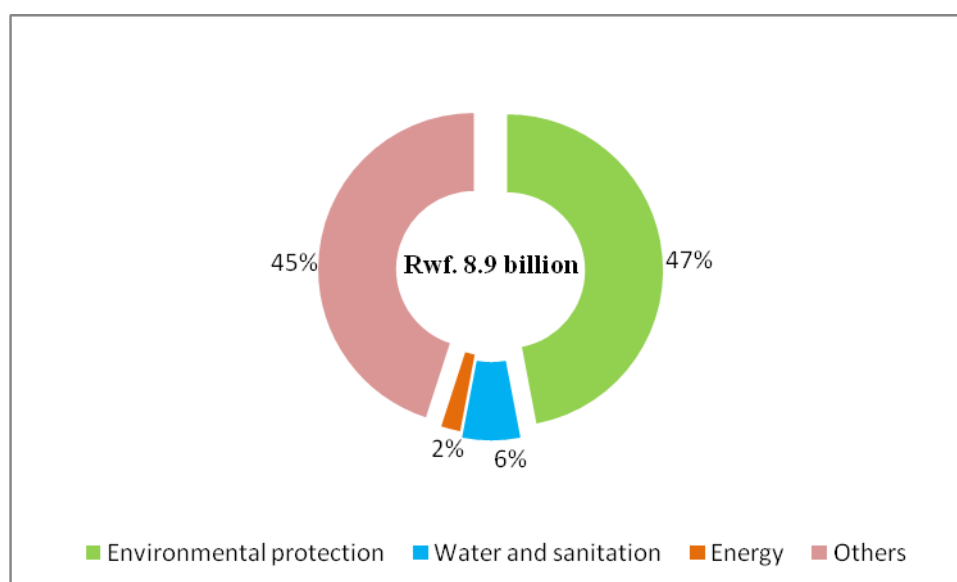
232. **In land housing and community service, Rwanda has been implementing the villagisation of low cost programme called "Imidugudu" to separate and optimize space for habitation from space for agriculture and grazing.** Although it evolved out of the historical need to resettle the refugees after 1994 genocide, over time it became integrated with provision of social services, access to energy including bio-gas, and sometimes rain-harvesting (as is the case in Gicumbi).

⁴⁴ However, a choice could also be made to create this as a window of financing under FONERWA

⁴⁵ According to MINICOM's Strategic Action Plan 2011/2012. The budget also other activities like feasibility studies for other industrial parks

233. The fact that it responded both to the country's high population density and to the needs of the poor needs special emphasis. Even as the country is now pursuing the low carbon green growth strategy, the paradigm that Rome was not built in one day points to the relevance of *Imudugudu* to meet the needs of the vulnerable and poor people. Presently, 39% of households live in *Imudugudu* compared to only 18% in 2005 [NISR, 2012].
234. **The GoR conceived the Vision 2020 *Umurenge* as a social protection and development programme in March 2007 with primary focus on eradication of extreme poverty.** Among others, this programme [VUP] was meant to help people realize their productive capacities **adapted** to their needs and to improve the community livelihood assets. Evidence from Figure 8.1 clearly shows how the communities' bigger share of their projects and expenditure went to environmental protection, water and sanitation, and energy. The proportionality of 'others' that include those for studies and surveillance, agriculture, revenue generation, transport infrastructure, education infrastructure and sanitary infrastructure are nonetheless equally relevant to help the poor adapt to climate change variability directly or indirectly.

Figure 8.1 Proportionality of environmental expenditure under VUP, 2010-2011



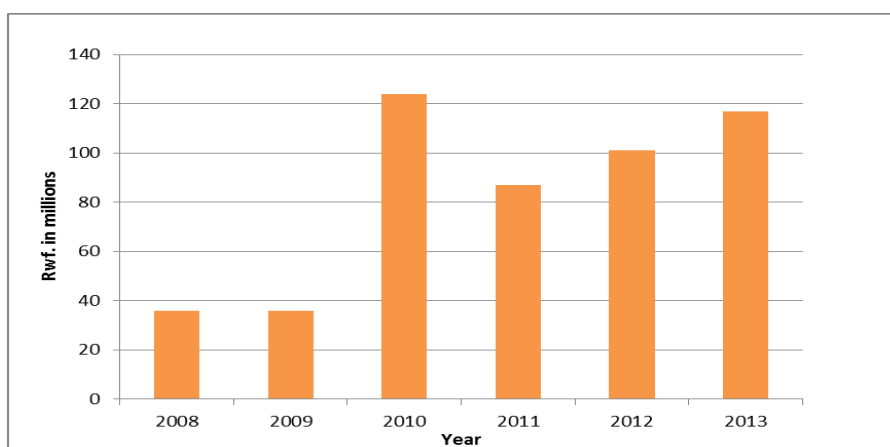
Source: Final Annual Report, RLDSF, 2010-2011

235. **Climate proofing was equally captured among** the communities implementing a wide range of intervention with scarce resources across districts. Some of the popular interventions derived from Annex 6 are given in Box 8.1.

Box 8.1 : Community level common climate proofing interventions

- Climate change awareness creation
- Tree planting and agro-forestry
- Energy substitution to biogas
- Low energy cooking stoves
- River banks protection
- Watershed protection
- Rain water harvesting

236. **In the health sector, studies have pointed to the rise of malaria and other diseases due to climate change** [Loevinson M.E:1994]. Rwanda has made steady progress overtime to make **access to health inclusive** of the poor by its Community Based Health Insurance (CBHI) which started off as a pilot in 1999, with premiums set at only Rwf 1000 [US\$1.67] during the roll out period in 2005-2011. By 2010, the utilization rate had reached 95%, from 31% of 2003. Despite the challenges of ensuring the financial sustainability, the political will and commitment to protect households against the financial risks associated with diseases and strengthening social inclusion in the health sector has become the envy of other East African states, who now wish the Rwandan model is replicated among the rest of EAC member states.
237. **Greening Kigali City and the 3 districts of Kicukiro, Nyarungenge and Gasabo has been a preoccupation of the city's authorities.** Expenditure for waste management, including inspecting and maintaining Nyanza land fill has been raising over the years as the population also increased [Figure 8.2.]. In addition, the total expenditure for 3 districts for 2013/2014 is estimated at RWF 31million. The city is planning to spend almost Rwf. 5.1 billion in 2013/2014 to purchase land and relocate some residents from the risk zones like hills and valleys.

Figure 8.2: Trends of expenditure for waste management in Kigali

Source: MININFRA

238. **The City should consider building public-private partnership for waste management by rebranding waste from a “bad” to a “good” for by-products like manure, plastics, briquettes and even electricity.** In the long run that could translate into reduced greenhouse emissions from the landfill which can earn carbon credits and climate change financing. For example, under the World Bank funded Environment Management Capacity Building Project 11[EMCBP11] in Uganda, a number of municipalities hopes to cash on payments from the World Bank from the emission credit due to composting [Nelson Omagos, 2012].
239. **Finally but not the least, institutional reorganization and establishment have been made to lay strong foundation for climate proofing in Rwanda.** REMA’s structure and staffing have been put in place for the purpose. A ministry responsible for Disaster Management and Refugees [MIDIMAR] was established recently. Given that meteorological services are central to decision making for climate change, it would perhaps be worthwhile for the government to consider relocating it under the mandated Ministry of MINIRENA.

8.2 Conclusion, Key message and Recommendations

240. **Rwanda has made break through with regard to climate proofing across all sectors and it would be in its interest if it continued to maintain these achievements on its policy agenda during EDPRS 2implementation.** That aside, the case studies reviewed above have shown that climate proofing is only effective if it is activity or sector specific. The interventions in agriculture differ from those of industry, urban development, health, industry, settlement, social protection and institutional development to mention but a few. By implication, the demands for capacity building, financing, up scaling will be sector specific. However, collectively they are relevant for environmental expenditure review. Government needs to popularize these best practices among its diverse stakeholders.

Message 8: Climate proofing in Rwanda is not new, but if it were to be marketed as such, it would benefit many more poor people, including attracting adequate policy, financing and capacity development investment.

241. By way of recommendation, Rwanda should consider adding value to its planning and budgeting processes by developing a national policy for climate change in its own right.

9: MAJOR LESSONS FROM PEREC FOR EDPRS 2 IMPLEMENTATION

9.1 Improving financial management and aid tracking.

242. Improving **pro-poor targeting of public expenditure has been emphasized both in policy provisions and planning guidelines in Rwanda**⁴⁶. However, the ability by MINECOFIN to guide the sectors can only be realized if it fully implements its Financial Management Reform Strategy, 2008-2012 and the supportive Action Plan 2009-2012. That is the only way it would realize all the three strategic outcomes that relevant for any public expenditure review. They are:

- (i) Aggregate fiscal disciplines and sustainable budget balance
- (ii) Strategic allocation of resources
- (iii) Efficiency use of resources in the service delivery.

243. **It is because the financial reporting through RLDSF has systematically been maintained, that it became possible to show the degree of distributional equity across sectors and districts in Chapter 5 and the relationship to poverty reduction in chapter 6.** That should be an important lesson even for EDPRS 2 implementation. Owing to the fact that only 57% of aid goes through the national budget process, the strategy for pro-poor targeting of expenditure becomes delayed. Accordingly, improving the climate and systems so that Rwanda takes full ownership and accountability of expenditure should underlie EDPRS 2 implementation, even if it means seeking technical assistance to create that enabling environment. As highlighted in this report, tracking expenditure from the end-users to the source of funding is not only tedious, but also expensive.

9.2 Affirmative action to broadening environmental protection functional classification

244. **Over the review period, MINECOFIN has greatly improved the structure of the budget, showing clearly programmes and sub programmes both under the budget agencies and the functional classifications, including under the one for Environmental protection.** This is shown in Table 9.1 whereby in 2012/2013 budget, 2 additional sub programmes of waste water management and pollution abatement have been made to stand out. As it can be seen from the same table, waste water management was allocated 68.7% of the entire budget under the environmental functional classification.

⁴⁶ MINECOFIN's National Planning, Budgeting and MTEF Guidelines, 2009

Table 9.1: Details shown under environmental protection under different fiscal years

Breakdown	2009/2010 [Rwf billion]	2012/2013 [Rwf billion]
Waste water management	-	27.124
Protection of biodiversity and landscape	1.780	8.525
Environmental protection	3.510	3.658
Pollution abatement	-	1.25
Total	5.290	39.433

245. The evidence in Table 9.1 should motivate MINECOFIN to broaden the structure to reflect climate change expenditure, particularly if it is solely for “principal objective” rather than “significant objective”. In that way, the government would be emphasizing problems peculiar to it e.g high costs and reduction of GDP due occasional flooding in valleys of the highly density populated mountainous and poor country of 1000 hills. In any case, that would not make MINECOFIN less compliant to COFOG. Taking this affirmative action would give the following benefits:

- (i) government would signal to all the budget agencies where its **opportunities** to tap and **challenges** to address lie by altering the budget ceilings under the sub-programmes ahead of budget preparation, e.g it evident in the table that the bigger share of 68.7% for in 2012/2013 went to waste water management
- (ii) it would overcome the big problem of failure to reflect the budget for **environmental mainstreaming, climate proofing**, and delivery on the ‘green growth’ strategy.
- (iii) it would consolidate the transfers through ministries to Districts and enable them to practically implement “downstream” interventions from the very many “upstream” policy provisions.
- (iv) it would broaden the understanding of environmental issues at district level beyond the commonly understood ‘tree planting’ activities
- (v) it would enable MINECOFIN **apportion** appropriate share of expenditure between Ministries responsible for “upstream” policy interventions and districts responsible for implementing “downstream” practical interventions.

9.3 Balancing quick “wins” for tangible benefits with long term public environmental benefits.

246. It emerged from the submissions of the districts that environmental issues are not prioritized because they do not confer immediate short term “tangible” benefits. That is not a problem only in Rwanda but across countries, surprisingly including the rich ones. Yet at the back of everyone’s mind, it is common knowledge that one cannot attain long term sustainable benefits unless he/she foregoes short run interests. Likewise, at policy level, the concept of a “public good” is well known and documented. That is a good to which everyone may have access without excluding any other person [e.g. clean air].

247. Globally, the challenge is that because many public goods are not traded, we say that there is a 'market failure' to signal their relative scarcity and justify spending. The concept of 'market failure' explains why countries are collectively vulnerable to the problem of global commons like climate change. But as Rwanda warns travelers across its borders, environment has no boundary. It only needs to keep a proper mix between short-term private benefits with long term environmental public benefits.
248. **In the same spirit, the concept of "mainstreaming" environmental issues has to be brought down to practical operational level, building on the recent achievements.** Often, the term, is used without making reference to the very many benefits associated with it like profit optimization over a longer term, sustainable business/enterprise and growth, cost-saving, safety, respect for human rights, e.t.c. It was gratifying that both the government and the ENR sector made objective self-assessment on their progress in mainstreaming environment. They should not hesitate to seek appropriate technical assistance to address the challenges.
249. **The following 6Rs should be used by policy makers to step up all efforts for mainstreaming environment and climate change to the citizens.** Only then will the concept of a "green economy" take root. Ideally, even the theme of World Environment Day 2013 could have been rephrased as 'Rethink, Reuse, Reinvest' instead of 'Think, Use, Save' because all people need to be reminded to rethink their choices for investment and consumption, to reuse or recycle and to reinvest into environmental sustainability beyond saving.

R = Rethink

R = Reduce

R = Reuse

R = Recycle

R = Recover

R = Redesign

250. **It was impressive to capture from the districts a wide range of potentially viable ENR-based enterprises that could serve to offer quick "wins", while at the same time broadening the opportunities for employment for the poor and the vulnerable.** Some of the obvious ones standing out are given in Box 9.1. The government can use them in the short run to gain the confidence of its citizens and to change their mindsets as they hold on to also benefit from the "public goods" benefits.

Box 9.1: Emerging ENR pro-poor enterprises at district level

- Waste collection and conversion
- Recreation, cultural and eco-tourism
- Public cleaning and beautification
- Forest value addition enterprises
- Orchard and commercial tree nurseries
- Sustainable mining and quarrying
- Biogas installation in homes for SMEs

Source: Based on Budget Tracking Tool

251. **As all the stakeholders invest in the ENR based enterprises that give short run tangible benefits, government can then rally them to embrace mainstreaming concept using multiple entry points.** Those that have been captured during the review are given in Box 9.2 and there could be many more in the country. Ideally, the best entry point for any mainstreaming of conceptualization of an idea or activity and ensuring that the mainstreaming process is continued into other stages of design, financing, implementation and monitoring and evaluation.

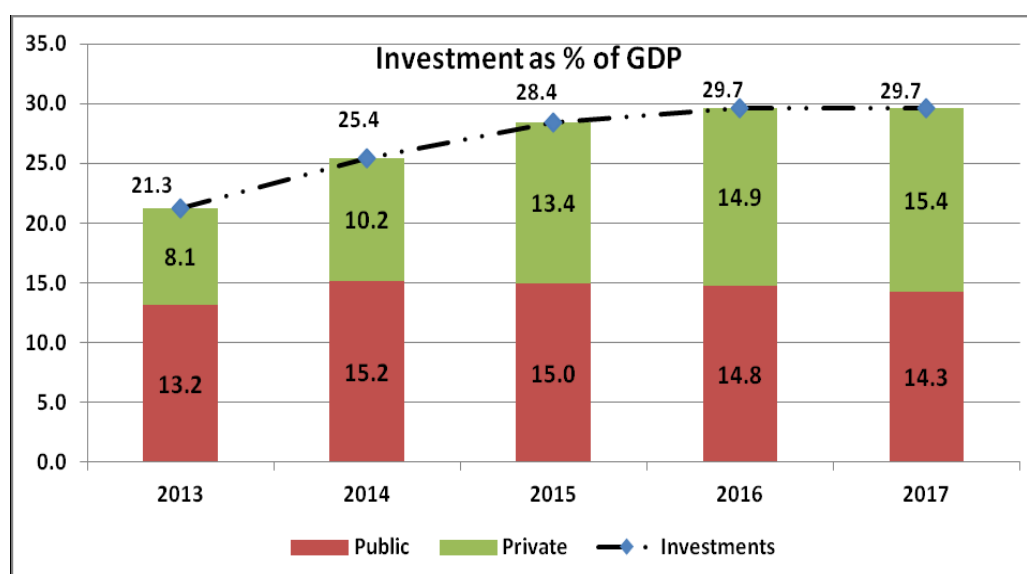
Box 9.2: Emerging entry points for mainstreaming environmental issues

- Revision of ENR sector plan to make it complaint with EDPRS 2
- Revision of sub-sector strategic plans
- District Development Plans
- EIA processes
- FONERWA's funding priorities
- Revision of DP's cooperation frameworks
- Research e.g through RAB
- Monitoring processes
- Cleaner Production Processes
- Partnership building strategies
- Performance contracts
- New programme/projects design
- Institutional reforms and capacity building
- Standards e.g for infrastructure, housing, technology
- Surveys e.g by NISR
- Curriculum Development

9.4 Formal partnership building for EDPRS 2 implementation

252. It is envisaged that half way during the implementation of EDPRS 2, the contribution of the private sector will surpass that of the public sector as shown in Figure 9.1. The policy implication is that the government must make them ready to take on greater responsibility for mainstreaming under EDPRS 2. Evidence has also come to light that there are many private firms, NGOs and CBOs already implementing interventions for environment, natural resources and climate change. However, like the public agencies, they are equally constrained both in financial and human capacity.

Figure 9.1: Projected Public and private investment as a percentage of GDP under EDPRS 2



Source: EDPRS 2

253. Thus, leveraging each other's resources and capacities could synergistically create greater impacts than any of them implementing in isolation of the other. However, it would require processes of building trust and confidence with each other and formalizing the partnership for implementation, with clearly defined roles, budgets, benefits and sanctions. It would also call for partnership principles and a code of conduct. Annex 7 for example gives a list of active non-state actors that have complemented government effort in environmental management at district level. They too could be selected to benefit from the comprehensive capacity building programme for environmental management and climate change adaptation.
254. In the same vein, it would be strategic for FONERWA to leverage the capacities and financial resources with the private sector when it is still well funded without assuming that it would continue to attract substantial funding as it did from DFID. This is because all that assistance was given to be used as a "sinking fund" over two years without flexibility for using part of the support to create an "endowment fund" that would generate revenues to perpetuity.

9.5 Capacity Development for environmental planning, financing and climate proofing

255. **A key lesson is that development, policy and institutional reforms create new demands for capacity development.** Staffs are also being recruited into institutions while others leave. It is for this reason that governments across the world invest in capacity development all the time. It is for the same reason that capacity development has been targeted at the individual, institutions and systems.
256. **In the short run, capacity to raise and share out equitably environmental financing should be a priority by virtue of the fact that Rwanda is still a natural resource dependent economy.** Efforts must be geared towards developing the organizational capacity of FONERWA and MINECOFIN to leverage financial resources for environmental management from a cross-section of stake holders like development partners, international foundations and the private sector. Equally, a proper mix of financing mechanisms must be put in place. They include not only increase in sinking funds and finances but also endowments, environmental fiscal reforms (economic instruments), and public-private partnerships.
257. **At individual level, capacity development to lobby and advocate for the ENR sector to get a commemorate share of financial resources needs to be supported.** Long term and short term training in resource economics, environmental accounting and climate change economics will be critical. Packaging and soliciting tailor made technical assistance in the short run should be considered to the sector
258. **It was gratifying to find that capacity to improve environmental planning and choices through the Environmental Impact Assessment [EIA] processes had taken root.** REMA had for example issued up to 158 EIA certificates by mid-August since the beginning of the year covering activities spread across sectors and districts. Given that it is also compiling a list of EIA practitioners, it would serve to target them and build their capacity for climate proofing to further enhance their capacity in the EIA processes.
259. **However, the key lesson the government must come to terms with is that much of the public development expenditure is outside the ministry and agencies responsible for environment, natural resources and climate change.** Accordingly, a comprehensive capacity development programme should not be restricted to the sector but should include other sectors and non-state actors. Table 9.2 only lists the capacity development needs central to this review. Nonetheless others have been implied in Table 3.3 for districts.

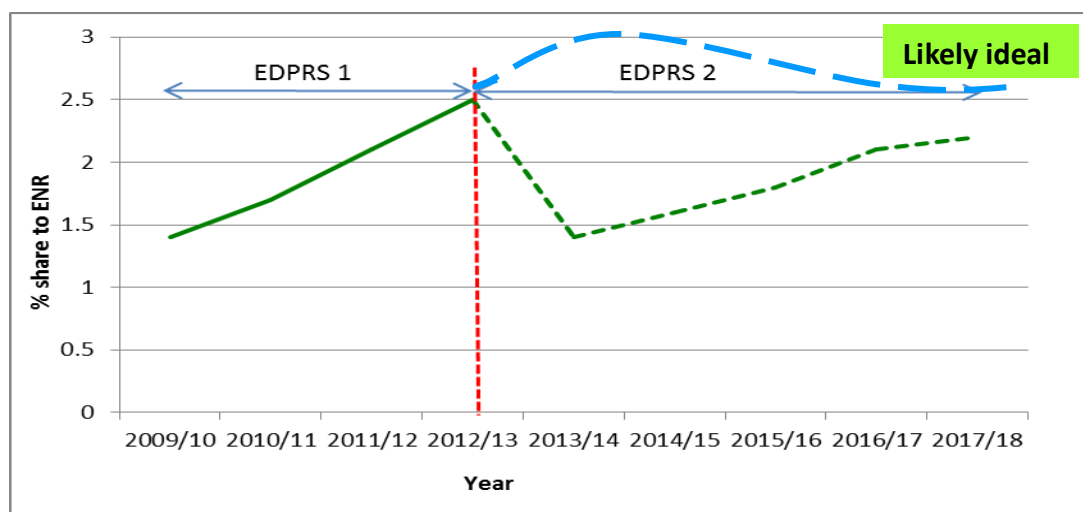
Table 9.2: Summary of key capacity needs identified under PERECC

Type of needs	Specific needs	Location of the capacity need
Individual	• Environmental, natural resources climate change economics. • Policy planning and advocacy • Research, advocacy and dissemination • Climate proofing of development plans • Environmental (green) accounting)	• MIRENA, REMA, RNRA • MINIRENA • REMA, RNRA, • ALL SECTORS • MINIRENA/MINECOFIN
Organisational	• Resource mobilization for environmental climate change and leveraging resources from the private sector. • Formal partnership building for joint implementation with non-state actors. • Organizational learning and knowledge management.	• MINECOFIN, FONERWA • ALL SECTORS • ALL SECTORS
Institutional systems	• Improving budget and donor aid databases to facilitate inter sectoral allocations and spartial distribution[by district] • Sector wide planning, coordination and evaluation. • Weather recording and dissemination particularly to promote weather indexed crop insurance among the poor	• MINECOFIN • MINIRENA • MININFRA

9.6 Increasing financing for environment and climate change

260. **According to EDPRS 2 costing, the share of ENR, WATSAN, and Energy collectively is projected to be 19 %, of which only 2 % is the share to ENR, while WATSAN will take 10% and energy 7%.⁴⁷** If one compares the progressiveness of funding under EDPRS 1 from 1.7% in 2009 to 2.5 % in 2012 with the costing for the same sector under EDPRS 2 in Figure 9.2 one gets a view that the momentum may be lost. This is not true given the recent funding by DFID to FONERWA, ADB's funding to energy and energy substitution and EU's funding of over Rwf.45 billion for centralized sewerage system for Kigali.

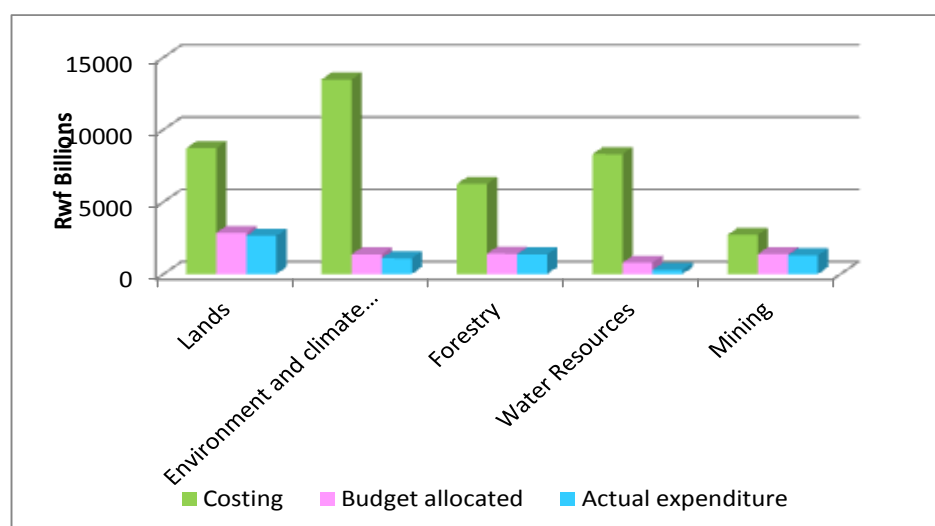
⁴⁷ Read EDPRS 2 pg 113

Figure 9.2: Actual funding under EDPRS 2 likely to be better than its costing

Source: Past Budget Laws & EDPRS 2 costing

9.7 Making realistic sector plans

261. Further, sub-sectors under ENR would need to be guided to set their budgets realistically. Evidence in Figure 9.3 shows that costing across all of them is way beyond what MINECOFIN can offer.

Figure 9.3 : Relationship among costing, budget allocation and actual expenditure, MINIRENA 2011/2012

Source: Sub-sector strategic plans, Budget Law 2011/12 and execution report

9.8 Conclusion, Key message and Recommendation

262. No doubt evidence has come to light that perfecting government financial budgeting government financial budgeting systems would be beneficial for decision making not only for the government but also for all development partners wishing to have their support benefit the poor.
263. Specifically with regard to environment and climate change, broadening the functional classification, and using it to give indicative financing would motivate sectors and districts to shift their priorities to where MINECOFIN signals the greatest need.
264. Further, the demand from districts for more funding, including the funding that would broaden livelihoods, employment, enterprise opportunities should receive priority attention.

Message 9: Balancing “upstream” policy processes with “downstream” investments that can create confidence, quick “wins”, and act as springboard for long term human capacity development, industrialization and a vibrant service sector is the way to go under EDPRS 2 implementation.

265. It is therefore strongly recommended that;
- (i) the sector should make a realistically costed long term plan, with a strong component for capacity building among public and non-state actors, and realistic indicators
 - (ii) MINECOFIN should broaden the ‘Environment Protection functional classification to communicate its strategy for green growth and low carbon development, thereby institutionalizing “mainstreaming concept’ as necessity rather than an “add-on”, and signaling where opportunities to tap and challenges to address lie.
 - (iii) The Development Partners should likewise support MINECOFIN to further improve its systems so that they all use the same systems to rationalize their financing allocation, particularly as they all embrace the Division of Labour.

10: OVERALL CONCLUSIONS, KEY MESSAGE, SUMMARY OF ISSUES, OPPORTUNITIES AND RECOMMENDATIONS

10.1 Conclusion

266. Main conclusions, Key messages and recommendations have been given at the end of each chapter. Suffice it to only repeat only the overarching ones. The sources of financing environment, natural resources and climate change to Rwanda are very many and often overlapping. In recent past, Rwanda has improved its public financial management systems, and it is still committed to improve them further to meet the demands of decision making. One hopes that by so doing, it will be creating the necessary enabling environment to motivate all its development partners to put their support on budget in accordance with the **Paris Declaration of Aid Effectiveness**. Until that happens, sufficient resources and capacities must be mobilized to track financing and expenditure from different depositories of data. The fact that 57% of aid money is used outside the public financial management systems imposes a caveat in the interpretation of some of the findings.
267. A general finding is that in as much as MINIRENA and its SAGAs are mandated to provide policy oversight and pace for environmental management, they cannot achieve much unless other sectors and districts which collectively absorb more funds, and carry out more investments take it as their responsibility to improve environmental management and climate proofing their investments. This is because as the ministry, it absorbed only 0.9% of the 2.5% allocated to environmental functional classification in 2011/2012, implying that the bigger share was absorbed in other sectors. The 2.5% absorption of 2011/2012 rose from 1.4% of 2009/2010, implying there has been some increased allocation to the functional classification over EDPRS I. It is more likely that the expenditure was higher because of mainstreamed interventions which the chart of accounts is not yet able to capture.
268. In 2011/2012 financial year MINECOFIN broadened the sub-programmes under environmental protection functional classification to include for the first time a sub-programme on waste water management and pollution abatement. The former was allocated as high as 68.7% of the budget under that classification. MINECOFIN can therefore take affirmative action by first broadening the programmes and sub-programs under the 'Environmental Protection' functional classification in the budget structure and use it to communicate to the changing priorities for the environment and climate change. Among the EAC five member states, Rwanda takes the middle position with 14.1% of its tax revenue as a percentage of GDP. Its expenditure for environmental expenditure as a percentage of GDP which is 0.89% is comparable with that of developing countries.
269. Despite the increase of the budget to environment generally, it is still structurally difficult to track expenditure for mainstreamed interventions across all sectors and stakeholders because of two main reasons. Within the public institutions, the chart of accounts used in budgeting is built around the pillars of budget agencies, and their corresponding programmes, projects, sub-programmes and economic classification, that is, wages and salaries, goods and services,

transfers and subsidies and developmental expenditure. The chart of accounts is not 'activity' based. Secondly, there is no expenditure repository for the non-state actors.

270. Owing to these challenges, it has strongly been recommended that future public expenditure reviews should be restricted to public institutions while any tracking of expenditure among the non-state actors should be commissioned as specific case studies.
271. To date, the foundation for dully establishing the efficiency and effectiveness of expenditure even within the ENR Sector alone is constrained by two main factors. The first one is that whereas the expenditure is well structured by fiscal years, the sector's indicators by its sub-units are not correspondingly matched to the fiscal years. Besides, the clarity of indicators between 'output' and 'outcome' indicators has not yet been achieved. This has equally been echoed under EDPRS 1 evaluation. That is a gap that the sector needs to address immediately. The second limitations is that there are no standardized 'unit costs' and more in-country studies need to be made especially for the most repetitive and widespread transactions.
272. Nonetheless, the government has taken bold steps to enhance efficiency and effectiveness of public expenditure. They include establishment of SPIUs, embracing DOL, popularizing public-private partnerships, holding leaders accountable under *imihigo* and taking a strong stand against any form of corruption.
273. The policy and legal framework for environment and natural resources has systematically evolved particularly after 2005, and has provided solid foundation to guide all the sectors. It would also be in the interest of all stakeholders if the government formulated a policy for climate change in its own right to create enabling environment for triggering more resources to all the sectors flowing under the auspices of climate change financing.
274. Further, the government has to pro-actively engage the private sector to leverage resources for environment and climate proofing, given the rise in FDI, and the fact that government has projected a decline in grants over the EDPRS 2 period. FONERWA too should leverage resources now when it is still well funded. Supporting districts to enhance and harmonize their revenue generation generally and from ENR specifically should also be given priority by MINECOFIN in collaboration with MINALOC and MINIRENA. Over the EDPRS 1 period, the proportion of ENR revenue to total district revenue was 5.6%, and it could reach 10-15% during EDPRS 2 period if the strategies districts are planning to implement are supported. That is a strong forward looking recommendation to deepen decentralization in Rwanda.
275. It has been shown that the confidence by government and donors to use to use RLDSF as an intermediary for funding to local government entities has helped to deepen decentralization. The volume of funding through it has grown from a mere 1% in 2002 to 33% in 2011 mainly because it reduces the transaction costs in service delivery to local government. It is because of this achievement that it has been recommended that government should consider assigning it additional responsibility to act as a repository of local government revenues.

276. However, like the public institutions, the remaining challenges of environmental mainstreaming and climate proofing cut across the private sector, NGOs, CBOs and communities. It is for this reason that it has been recommended that any future capacity building programme in future should be inclusive and sufficiently funded.

Message 10: Revised sector-wide plans, with strategies for leveraging resources from private sector and for capacity development for all stakeholders would be the most appropriate rallying platforms for fully mainstreaming environmental sustainability and resilience against climate change across all sectors under EDPRS 2 implementation.

277. On its part, it would be recommended that government anchors all poverty reduction interventions in the natural capital now until the same capital is used as a springboard for human capacity development, off-farm employment, youth employment, rural development and economic transformation under EDPRS 2. Table 10.1 gives overarching issues, opportunities and recommendations for implementation under EDPRS 2.

Table 10.1: Matrix of summary of issues, opportunities and recommendations

Problems, opportunities identified	proposed solutions/ recommendations	Lead institutions to implement recommendations	Timeline
1. Rwanda is still a natural resource dependent economy, and vulnerability to environmental impacts and climate change impacts and poverty go hand in hand.	- Government should influence more donors to give priority to allocate aid to environmental and climate change issues during EDPRS 2 implementation.	MINECOFIN	2013-2018
2. The spread of Climate Change proofing development among sectors and districts is widespread but lacks visibility	Government should develop a climate change policy in its own right	MINIRENA REMA	2013-2018
3. There are emerging opportunities for climate change financing that can benefit different institutions in Rwanda, most of which are given on competitive basis to very good proposals.	- MINECOFIN/REMA should track such opportunities and inform the institutions satisfying the eligibility criteria - Strengthen resource mobilization capacity through either staffing or training in quality proposal writing or both.	- MINECOFIN, FONERWA] - DO	Immediately.

Table 10.1: Matrix of summary of issues, opportunities and recommendations cont'd

Problems, opportunities identified	proposed solutions/ recommendations	Lead institutions to implement recommendations	Timeline
4. The capacity gaps for sustainable environmental management climate change proofing and their mainstreaming is still big especially at districts	- The GOR should solicit for assistance for a comprehensive environmental and climate proofing project covering at least 5 years to benefit all stakeholders	MINIRENA MINICOFIN	2013-2013
5. Districts' strategies to broaden revenue from ENR are promising	- Government should provide policy and legal framework for financing ENR, collecting its revenue, and re-investing it	MINECOFIN MINALOC	2013-2015
6. Sub-sectors plans and strategies have ended or about to end	- Sub sectors, sectors should align the subsequent plans and strategies with EDPRS 2	Sector working group	Immediately
7. The Indicators in the ENR sector have been revised several times, complicating analysis of efficiency and effectiveness	- Sub sectors should agree on indicators for EDPRS 2 period by each fiscal year to facilitate better future analysis of efficiency and effectiveness of expenditure	Sub sector working groups	Immediately
8. MINECOFIN has broadened the sub-programmes under its Environmental Protection Expenditure	- MINECOFIN should include a sub-programme for climate change [as principal objectives] within the existing chart of accounts - Earmarked funds for environment and climate change to districts should be stepped up	MINECOFIN MINECOFIN	2013-2018 Immediately
9. Unless all development partners put their aid on budget, MINECOFIN will find difficulty in ensuring distributional equity and targeting of expenditure intra and inter sectors	- The GoR should hasten to improve the reporting systems within and across sectors so that the DPs find it cost-effective to prioritize the targeting of their assistance using government financial and monitoring systems.	MINECOFIN DPs	2013-2014
10. Implementation of EDPRS 2 offer opportunities for broadening public-private partnership	- Government should develop a public-private partnership policy for strategic interventions in the ENR sector, with clear roles, budgets, benefits and code of conduct.	MINIRENA	2013-2016
11. The scope, coverage and content of JSRs under the ENR sector varied a lot, a factor that denes temporal comparisons.	- MINECOFIN should provide generic outline for the scope of JSRs to make the findings aligned to EDPRS 2 implementation and its MTEF to ease temporal comparisons.	MINECOFIN	Immediately

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Annex 1: Terms of Reference

CONSULTANCY TO CONDUCT A PUBLIC ENVIRONMENTAL EXPENDITURE REVIEW (PEER)

Location : Kigali, RWANDA

Vacancy Type :

Application Deadline : 25-Mar-13

Type of Contract : Individual Contract

Post Level : International Consultant

Languages Required :

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Background

The current Poverty and Environment Initiative project is an extension of the successful Government of Rwanda - UNDP/UNEP Poverty and Environment Initiative Rwanda Project that has been implemented since December 2005. The project aims to enhance the contribution of sound environmental management to poverty reduction, sustainable economic growth and the achievement of the Millennium Development Goals. The project has recently commenced its third phase with a focus on longer term capacity development to more fully integrate environmental sustainability in development planning and investment at national, sector and decentralized levels in the context of EDPRS implementation and monitoring. Proposed investments would focus on deepening the gains from the previous phase. The current terms of reference for this consultancy seek to address one key area among the four outputs of the project focus and support for the 2012 – 2013 period:

Support to the development of sustainable investment frameworks for successful environment and climate change mainstreaming. The broad specific approach will involve conducting a Public Environmental Expenditure Review (PEER). This will permit identification of budget allocation and expenditure to facilitate tracking of the implementation of the cross sector strategy, green growth and climate resilience as well as environmental sustainability and the rational utilization of natural resources in support of sustainable growth and poverty reduction.

Thus, the assignment will undertake the process and specifically develop relevant tools towards improving budgeting in a way that influences sectors towards climate resilience, environmental sustainability and inclusive growth. The overall approach will entail conducting a comprehensive PEER which will primarily rely on sector engagement using sector specialists to analyse sector strategies for

integration of environmental sustainability and climate resilient objectives, their costed environment and climate change priorities and/or budgets and their results frameworks in informing PEER. The PEER, therefore will be conducted to help evaluate the appropriateness in the use of funds in the environment sector and climate change sector. Trends and issues to be analysed will follow the major standard PER themes of; public allocation and expenditure trends, public expenditure composition, efficiency of public spending, poverty targeting of expenditure and public expenditure management

This will then benefit any future revisions of sector plans, the preparation of the sector MTEF/budgets and the accounting and auditing functions within MINECOFIN, MINIRENA and REMA.

The analysis and recommendations are intended to demonstrate how GoR and donor resources are currently used, the functioning of the SWAp and the level of support to the sector in attracting funding and guiding resources allocation and expenditure and to recommend how to improve their usage. The exercise is not an audit, but a tool to enable MINIRENA and REMA to improve prioritisation, efficiency and effectiveness of all public resources in the environment and climate change sector.

The review should be extensive and cover the period 2008-2012 i.e. EDPRS 1 period. A key aspect of the PEER is to carry out effective sector engagement that facilitates identification of sector priorities that integrate environmental sustainability in order to allow analysis of allocations, expenditures, efficiency of budget allocations, as well as the role played by stakeholders in the budget execution.

The primary objectives of the current assignment are;

“To conduct a Public Environment Expenditure Review (PEER) which will help to evaluate the environment and climate change mainstreaming and appropriateness in the use of funds in the environment and climate change sector and to articulate recommendations aimed at increasing efficiency of the country public spending in the ENR sector (Environment and climate change, Land, forestry, mining and water resources management).

A key element of this consultancy is to provide capacity building support in policy analysis, planning and budgeting, budget tracking, public expenditure review and analysis, for staff in ministries that are in partnership with PEI by the international consultant. Thus, the focus will be to guide the sectors on the environmental and climate change mainstreaming and subsequent implementation of the EDPRS II.

The success of the assignment will be measured by the level of engagement and involvement of sector specialists in the planning, budgeting and monitoring and evaluation departments in identification of environment and climate change mainstreaming entry points, the review and analysis of strategic plans for integration of environmental sustainability, the analytical reviews of strategic issues papers, the budgets including Medium Term Expenditure Frameworks (MTEFs) and the results frameworks including Joint Sector Reviews (JSRs).

On this note, REMA would like to hire an International Consultant to conduct a Public Environment Expenditure Review (PEER).

Duties and Responsibilities

OBJECTIVES OF THE ASSIGNMENT

The primary objectives of the current assignment are;

“To conduct a Public Environment Expenditure Review (PEER) which will help to evaluate the environment and climate change mainstreaming and appropriateness in the use of funds in the environment and climate change sector and to articulate recommendations aimed at increasing efficiency of the country public spending in the ENR sector (Environment and climate change, Land, forestry, mining and water resources management).

A key element of this consultancy is to provide capacity building support in policy analysis, planning and budgeting, budget tracking, public expenditure review and analysis, for staff in ministries that are in partnership with PEI by the international consultant. Thus, the focus will be the EDPRS implementation period that commenced in 2008 that is scheduled for completion in December 2012 and how the lessons on environmental and climate change mainstreaming will inform the formulation of EDPRS II.

The success of the assignment will be measured by the level of engagement and involvement of sector specialists in the planning, budgeting and monitoring and evaluation departments in identification of environment and climate change mainstreaming entry points, the review and analysis of strategic plans for integration of environmental sustainability, the analytical reviews of strategic issues papers, the budgets including Medium Term Expenditure Frameworks (MTEFs) and the results frameworks including Joint Sector Reviews (JSRs

Public Environmental Expenditure Review

The PEER should cover public expenditure for the environment including climate change and natural resources sector on an annual basis for the period 2008-2012. For this period, the environment sector encompassed all spending by MINELA/MINIFOM when the environment and natural resources was restructured into two Ministries and subsequently MINIRENA, when all the sub-sectors that constitute ENR were once again restructured under the same Ministry; all local administration expenditure at Province and District levels on environment related interventions, environment related spending under other ministries, and all donor projects under the environment sector. **To the extent possible, and subject to data availability, the PER should include an economic analysis of the impact of investments in promoting sustainable environment and natural resources management and climate change, on human**

wellbeing at household level.

The following description provides detailed elements of the PEER for the stated period.

- Overview of allocations and trends in public expenditure from all sources (domestic revenue and external funds) Overview of other environment sources and expenditure trends where data available – private sector, NGO, community, households
- Trends on prioritization of the environment sector within overall Government of Rwanda budget and comments on intra-sectoral allocations within the environment sector. Clarify definitions of sector and sub-sectors used in analysis
- Analyse the effectiveness of expenditure allocation, disbursement and execution.
- Outline reasons for any differences between approved budgets vs actual disbursements and expenditures linking implications to progress in achieving policy objectives.
- Analyse input mix (including recurrent v capital, salary v non-salary, balance between management overheads and service delivery expenditure).
- Evaluate performance of Rwanda in relation to regional and international benchmarks. Cross country comparison should be made wherever possible throughout the report. Identify lessons from international best practice.
- Evaluate marginal social benefits vs marginal social costs on environment interventions in Rwanda where possible.
- Commentary and analysis on trends towards de-centralisation of funds.
- Analyse and comment on equity of allocations at local government level. Evaluate current allocation formulas for de-centralised expenditures and provide suggestions on how this could be improved using available data.
- Comment on the progressiveness of government spending by level of environment.
- Evaluate efficiency of fund allocation with regard to the semi autonomous government agencies such as REMA and RNRA – have the establishment had a value added to the environment sector in terms of financing and execution.
- Support Capacity Building for MINECOFIN and for planning staff in key sectors to integrate environmentally sustainable natural resource use and climate change into national and key sector plans, budgets and monitoring and evaluation using PEER as an entry point.
- Provide guidance on the actual drafting process for the section on environment and natural resources as well as climate change mainstreaming for the EDRS II document drawing on lessons from sector engagement and PEER.
- Organise and hold training on Public Environmental Expenditure Review (PEER) for the government staff focusing on key sectors under PEI (MINALOC, MINAGRI, MINIRENA, MINICOM, MINECOFIN, MININFRA)

Forward-Looking Analysis and recommendations

- Highlight areas for efficiency savings. Compare current and projected unit costs to other developing/SSA countries. Identify possible areas for cost savings and improvement in efficiency with reference to best practice surveyed in other developing countries
- Identify implications of Government decentralisation plans for environment sector. Provide recommendations on pathway for future decentralisation of funds.

METHODOLOGY AND REPORTING FRAMEWORK

The appropriate methodology to be used will be suggested by the consultant in a proposal, but should,

at the minimum, provide for adequate participation of key stakeholders in ministries and relevant public sector agencies, private sector especially service providers, and civil society representatives and at least four representative Districts for the five Provinces. It should ensure adequate consultation with different GoR Ministries/Agencies (at least: MINIRENA, MINAGRI, MINECOFIN, MINALOC) and decentralised levels (Provincial administration and district local authorities), donors and other development partners and end-users. It should also include a significant element of quantitative analysis, evidence based findings and an emphasis on making clear recommendations based on thorough, objective analysis that have substantively relied on sector specific specialists.

The suggested approach described above will broadly use the environment and natural resources sector working group and the sub-sectors of ENR as well as other sector working groups within the EDPRS context as the entry point for sector engagement and will involve participatory rapid appraisal of the planning and budget execution processes. A comprehensive training will be carried out to ensure capacity building for the target institutions.

The specific PEER training and capacity building should, at the minimum, include basic definitions and explanations of the terms used, statistical calculations, and assumptions used to derive the figures in the PEER report. The report will include details of relevant statistical figures, presented in formats that can be easily updated for future use/ reviews, preferably in a spreadsheet (MS Excel) or Database package (MS, This process should be closely followed up by relevant personnel in relevant Ministries including MINECOFIN and MINIRENA and REMA.

A clear definition of the environment and climate change sector is to be used in the analysis. It must include ALL relevant budget lines in and outside of MINIRENA and REMA, including district budgets, other relevant sector ministries and agencies who are involved in the preparation, execution, monitoring of or reporting on public expenditures related to environment and natural resources as well as climate change. Thus, public financial management and accountability institutions such as the Office of the Auditor General (OAG) and agencies such as the Institute of Statistics and the external finance unit in MINECOFIN as well as Rwanda Revenue Authority (RRA) will be consulted for purposes of tracking environment and climate change expenditure.

The PEER should be undertaken with strong collaboration between the GoR and the consultant(s), and efforts should be made to ensure ownership of the conclusions and recommendations by the GoR. It is to be emphasised that capacity building for MINECOFIN, MINIRENA and REMA staff is a key element of the consultancy process and a contractual obligation.

The final reports should include the following:

Executive Summary

A part from a comprehensive consultancy report, the International Consultant is requested to produce a clear and well written three to five page summary bringing out the main findings and recommendations from the report highlighting the level of sector engagement and involvement of sector specialists. This will guide the presentation for stakeholders workshop to validate the findings of the reports.

Conclusion and Recommendations

Prioritised list of recommendations and responsibilities with particular reference to how the sectors have been prepared to conduct ongoing PEER or capture environmental sustainability and climate change issues in sector specific PERs. Recommended action plan

Annexes

Definitions, assumptions and data sources
Public Financial Management Action Plan

Data Sources and references

Reference Materials available:

EICV I, II and III
EDPRS I (2008 – 2012)
Joint budget sector review reports
PEER report and Training and Reference Manual (2009)

DELIVERABLES

- An inception report after 10 days
- Public Expenditure Report after at the end of the assignment
- 3-5 page summary report including major findings and recommendations
- Report for sector engagement with guidance tools for monitoring P – E indicators

REMUNERATION AND OTHER CONSIDERATIONS

- The successful consultant will start his/her assignment as soon as possible following the completion of the recruitment process.
- Submissions will be accepted from Individual International Consultants only.
- The period of the assignment is 2 months working days spread over a 5 month period (June – October) and payment is based on deliverables:
- Inception report submission 20%
- Submission of information from Sectors and Districts 20%
- Sector engagement reporting and Draft PEER 40%
- Major findings and recommendations (3 to 5 pages) and Final PEER draft 20

SELECTION

PROCESS

Submissions will be evaluated in consideration of the Evaluation Criteria as stated below

Evaluation Criteria (Total of 100 points):

- Master's degree in a relevant field such as Development Economics, Environment Management, Environmental policy, Natural Resources Management, etc.; [20 points];
- Minimum five years' work experience in related fields such as Poverty Reduction Strategies, policies, Monitoring and Evaluation and strategic planning, including considerable experience dealing with policy makers at senior level [20 points];
- Experience of at least three years of working with Ministries of planning and/or environment is highly desirable, especially knowledge of leading policy frameworks and new directions [30 points];
- Experience of three years of conducting Public expenditure Review in developing countries [20 points];
- Fluency in English or French and a working knowledge of one of the other language [10 points].

The minimum required score is 70%. The candidate with the highest score shall be invited for contract negotiations.

Competencies

Functional Competencies:

- Professionalism
- Communication
- Teamwork
- Planning & Organization
- Accountability

Corporate Competencies:

- Demonstrates integrity by modeling the UN's values and ethical standards;
- Promotes the vision, mission, and strategic goals of UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability
- Treats all people fairly without favoritism;
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment.

Required Skills and Experience

Annex 2: List of stakeholders engaged to provide data and information

Name	Title	Organization	Telephone No.	Email
MINIRENA				
MUKANKOMEJE Rose	DG	REMA	0788300208	dgrema@gmail.com
MULIGO Godfrey	DAF	REMA	0788300254	muligo.godfrey@gmail.com
DUHUZE Remy	Head-Department of Regulation & Pollution control	REMA	0788612725	dunoremy@yahoo.com
INGABIRE Veneranda	Environmental Economist-Department of Research and Planning	REMA	0788493049	
RUSAGARA Paul	Program officer-district environmental facilitators	REMA	0788504311	ruspaul2001@yahoo.fr
Venuste Ntaganda	Legal Adviser	REMA	0788486956	nvenustus@yahoo.fr
Kamasoni Alice	Receptionist	REMA	0788668437	
Vivian Masabo	PEI Administration & Finance officer	REMA	0788482966	masabovivy@yahoo.com
TUSHABE Eddy	Procurement	REMA	0788597245	etushabe4@gmail.com
SABITI Fred	PEI Program Manager	REMA	0788681314	fredsabirwa@gmail.com
MULISA Alex	Fund Manager	FONERWA	0788302107	Amulisa2@gmail.com
KANEZA Annick	Legal officer	REMA	0788496100	musafiriannick@yahoo.fr
NIRINGIRE Gustave	Environmental Facilitator	REMA/PEI		gustavonir@gmail.com
NIRAGIRE Henriette	Environmental Facilitator	RNRA	+25078882815	henrinir@yahoo.fr
KATANISA Peter	Project Coordinator	SWAp Secretariat/MINIRENA	+250788414201	katanisapeter@gmail.com
MUTUNGIREHE Nazzia	Project Assistant	SWAp/MINIRENA	+250788544042	naziahmiss@gmail.com
MININFRA				
Joseph Mvulirwenande	Director of Policy and Planning	MININFRA	0788452587	Mvulirwenande@gmail.com
Jean Paul KEMAYIRE	Planning, M&E Officer	MININFRA	0788565157	Kemayire@gmail.com
Gustave Niringire	Environment Facilitator	MINECOFFIN	0788774860	gustavonir@gmail.com
Aphrodis MPAYIMANA	Accountant	Meteo	0786869600	mpayaphro@gmail.com
Dusenge Rose	Accountant	MININFRA	0788589251	rose.dusenge@mininfra.gov.rw
MUKASHYAKA Immacule	Officer in charge of greening and city beautification institution		0788533043	mshyaka1@yahoo.fr
KYATUKA	Officer in charge of greening and city beautification institution		0788280832	gkyatuka@yahoo.fr
MINAGRI				
Peter Ntaganda	MINAGRI	Professional in charge of agriculture finance	Peter.ntaganda@gmail.com	0783012114
Agnes Mushimiyimana	MINAGRI	Budgeting and planning officer	agnuscaa@gmail.com	0788898699
Seraphin Niyonsenga	RAB	Acting Director of planning	niseraphin@yahoo.fr	0788569037

Madeleine Usabyimbabazi	MINAGRI	Environmental Facilitator	madousa2020@yahoo.fr	0788879101
Name	Institution	Position	E- mail	Phone number
Peter Ntaganda	MINAGRI	Professional in charge of agriculture finance	Peter.ntaganda@gmail.com	0783012114
MINALOC				
Said Sibomana	DDG	RLDSF	0788306442	sibomanas@yahoo.fr
Jacques MunyankindiKarangwa	Fiscal & Financial Decentralisation Analyst		0788533413	karagwajacques@yahoo.fr
Crispin Kabeja	Environmental Facilitator		0788533413	Criskab@gmail.com
MINECOFIN				
RUSHABARAZA William	Sector Specialist	National Budget Directorate/MINECOFIN	0788 642910	william.rubasharaza@minecofin.gov.rw
HABIYAREMYE Pierre Célestin	Fiscal Decentralization Expert	National Budget Directorate/MINECOFIN		pierre.habiyaremye@minecofin.gov.rw
NIRINGIRE Gustave	Environmental Facilitator	REMA/PEI	0788 774860	gustavonir@gmail.com
MINICOM				
RUTAGUMBA Samuel	Director of Finance	Rwanda Bureau of standards(RBS)	+250 788303330	
NIYONZIMA Steven	National coordinator	Rwanda Resource Efficient and cleaner Production Centre (RRECPC)	+250 788306742	
TUYISHIME J.Rene Marius				
UNDP				
NTALINDWA Janvier	Programme Analyst	Poverty Reduction and Environmental Unit, UNDP		
Bugesera				
MUKARUKUNDO EUGENIE	DEF		0788607943	
GAKWERE john	Local revenue collection officer			
KIGANDA Francois	Budget officer			
UWACU Sylvie	Environmental officer			
MUKUNZI Emile	Forest officer			
BAZIRAMWABO J Cloude	PAREF			
SINDIKUBWABO Viateur	Accountant ai			
Burera				
NKEZABERA COME	DEO			
RUHANIKI FELIX	REVENUE OFFICER			
KABADA DIDACE	DIRECTOR OF FINANCE			
MUJYAMBERE STANISLAS	DIRECTOR PLANNING			
SEBAREZE WILDEBRAND	DFO			
TWAHIRWA COLONEILLE	PS/JADF			
SEBARWANYI	BUDGET OFFICER			
TUYIKORERE ALEXANDRE	LAND SURVEY			
MANIRAFASHA SYLVESTRE	DEF/BURERA			
Gakenke				
HAKIZIMANA SAMUEL	DEF		0788873008	
Kabaya Bobolo Rulinda	Director Planning		0788593770	Kabaya.bobolo@gakenke.gov.rw
Merenzi Nyonga Augustine	Environment Officer		0788787573	murenzin@yahoo.fr
Ndayabaje Jean de Dieu	Accountant		0783347884	ndayjdieu@yahoo.fr
Kwizera Jean Dieu	Budget Officer		07886276628	kwizerajeanpierre@gakenke.gov.rw

				e.gov.rw
Munyaneza Jean Dieu	Local Collection Officer		0788627628	Munyidd@yahoo.fr
Gasabo				
SALAMA FIDES	DEF	Sfides2000@yahoo.fr	0788555670	SALAMA FIDES
NDAGIJIMANA Ibrahim	Executive Secretary		07 88 30 15 31	
BARIGYE Peter	District Environment Officer		07 88 30 38 23	
NTIYAMIRA Faustin	District Agronomist		07 88 30 46 46	
BAGARAGAZA Boniface	Director of Planning, Monitoring and Evaluation		07 88 76 28 15	
NTAMBARA Theophile	Revenue Officer		07 88 75 10 66	
MPAKANIYE Yvonne	Budget Officer		07 88 84 39 02	
HAKUZIMANA Aimable	Accountant		07 88 47 17 40	
MUHOZA Ananie	Permanent Secretary of JADF		07 88 51 61 72	
SAFARI Pascal	In charge of Youth and Sport Officer		07 88 67 83 15	
Gatsibo				
MBONIGABA THEONESTE	DEF		0788603106	mbonattheo@yahoo.com
Rukundo G. William	E/S of Gastibo			
Basabose	VIUP coordinator		07885511697	
Butare James	District Revenue		0788874	
Mwiseneza Jonas	DEWO		0788771016	
Mugiraneza David	Director Planning		0788467960	
Uwitonze Afred	Assistant project manager ADRA		0788585635	
Shene Jean Chrysostome	E/S of RECOP		0788438506	
Bakundukize Dismas	DFO at RNRA		0788625426	
Bauyigana Laurent	Procurement Officer		0788759632	
Gatwaza Oliver Clement	DSCO		078854386	
Uwizeyimana Jean Bosco	DHO		0788631739	
Sana Sabin	DEMP11		0788415747	
Gicumbi				
SAKUFI Damas	DEF/Gicumbi District			sakufid@yahoo.fr
HABYALIMANA Jean Baptiste	Director of Planning , Monitoring and Evaluation		0788568631	
RUTABOBA Viateur	Revenue collection Inspector		0783392752	
TABARUKA Dieudonné	Accountant		0783422062	
BITWAYIKI Jean Damascène	Director		0784196521	
NKURUNZIZA Samuel	President		0788448254	
TWINE Dacien	Manager		0788868516	
NGUMIJE Jean Damascène	Zone Coordinator		0788576166	
Gisagara				
Noel NDAYISHIMIYE	DEF/REMA-Gisagara		0788680019	nondajulius@yahoo.fr
NDIMURWANGO J. Bosco	Director of planning in		0788777171	
MUGABO Laurant	District Revenue collection		0788886532	
UWIZEYE Justin	District Forest Officer		0788494425	
MUNEZERO Clarisse	District Agronomist		0788476681	
TWAGIRAYEZU Joseph	KOAMU President		0785069273	
MUKANEZA Elisabeth	TUBIBUNGABUNGE		0788369231	
Huye				
GAHAMANYI J. PIERRE	DEF		0783579858	Jipv21@yahoo.fr
Mutemberezi Paulin	Director of Finance		0788425543	Mupaulin2@gmail.com
Munyensanga Casius	Tax Collector		0788628242	Casiusjp2@yahoo.fr
Butera Martin	Urbanisation Officer		0788579585	Buteram5@yahoo.com

Ngendahimana Frodouald	Director Planning		0788579585	Frody45@yahoo.fr
Nsengiyumva Aimable R.	Director Agronomist		078800941	reneaimable@gmail.com
Kamonyi				
Ntiringanya Jean Baptiste	DEF		0788787847	ntinyajejan@yahoo.com
Kabalisa Valens	DEO		07887847	
Mbonigaba Pierre	COMPTABLE Of the District		0788891386	
Ndahiro Rogin	DAF		07883599924	
Munyankindi Pierre	Tax collector		0788653515	
TuyizereThadde	Executive Secretary of JADF		0786052856	
Tuyisenge Diedone	President Impariwakurusha		0786052856	
Mukashema Annonciata	In charge of hygiene		0726258733	
Sindikubwabo Eduard	Director Planning and Monitoring		07888405111	
Uramutse Francois Xavier	Agronom of the Sector			
MusengaruremaCyiliaque	In charge of settlement		0788840511	
Karongi				
NSEKANABANGA J.D'AMOUR	DEF		0788658803	
UGIRASHEBUJJA PROSPER	DISTRICT REVENUE OFFICER		0728413247	
HABINSHUTI ELIAM	TERMINALIA COMPANY MANGER		0788618975	
HABYARIMANA ERIC	DISTRICT ENVIRONMENT OFFICER		0788352413	
HAVUGIMANA MARTIN	RUBENGERA SECTOR AGRONOMIST		0788556487	
MBANGUKIRA MATHIAS	GASHALI SECTOR AGRONOMIST		0788803299	
Kayonza				
Alin B Bernardin	DEF/REMA		0788413796	Bebalvin@gmail.com
MUGABO John	Mayor Kayonza District		0788566490	
MUGIRANEZA Thierry	Director of planning, M & E		0788867177	
SAFARI Fred	Director of Finance		0788545864	
MUDA BUTUTA Danniell	District Revenue Inspector		0788706634	
NSANZUMUHIRE Anastase	Accountant			
MUDENGE Jean Paul	DEO		0788642401	
MUHIMA L. Edouard	PS JADF (a.i)		0788425113	
			0788800605	
NZAYIZERA Rodrigue	Land Bureau (a.i)			
Kicukiro				
NDAMGE JEAN	DEF		0788533043	jindamage@gmail.com
TWIZEYIMANA Jean Marie	Director of Finance		0788752383	Twizeye15@yahoo.com
HIGIRO Emmanuel	JADF Permanent Secretary.		07885126872	emmanuelhigiro@yahoo.com
MUSONI Jean de Dieu			0788592285	Jmusoni80@gmail.com
HAKIZIMANA Jacques	Act. As District Environment Officer		0788686923	Janmah62yahoo.fr
BENIMANA Theoneste	District Statician Officer		0788883424	Theo.benimana@kicukiro.gov.rw
MAHOROMEZA Robert	District Revenue Collector		0788490555	Mrobert02@yahoo.fr

HABONIMANA Charles	District Cooperative Officer		0788355452	habonimanacharles@gmail.com
KALISA Innocent	District Forestry officer		0788414404	kalinocent@yahoo.com
Kirehe				
RWINIKIZA BITITI	DEF		0788474716	bitityfreddy@gmail.com
Jeannette	Revenue officer		0788570218	
Kamwe Raymod	M&E KWAP		0788615830	
Muhanga				
UMUHOZA PERPETUE	DEF		0788510350	
BIZIMANA Eric	Director of Planification, Monitoring and Evaluation (Muhanga District)		0788858152	
NKUNDWANAYO Jonathan	District Local Revenue Officer		0788841416	
NDAYISHIMYE Jacqueline	District Revenue Accountant		0788792330	
MUKASANGWA Pélagie	District Budget Officer		0788774410	
GATETE Léon Patrice	District Environmental Officer		0788443499	
MPAGARITSWENIMANA Védaste	District Agronomist		0788777570	
BATEHO Théoneste	District Forest Officer		0788462786	
KAMANZI Innocent	President of COPEHOPE (Cooperative pour Horticulture et la protection de l'Environnement) Cooperative		0788841315	
SIMPUNGA Innocent	P.S Joint Action Forum (Muhanga District)			
DUSHIMIMANA J. Pierre	Coordinator of UGAMA CSC ("Centre de service aux Coopérative")			
BATEHO Théoneste				
NGOMA				
KABANDA CLAUDE	DEF	kadandum@gmail.com		
MUTABARUKA Sematabaro	Environment Officer)	mmbuecky@gmail.com		0788537075
NDAYISABA Steven	District planning and monitoring Officer)	ndayisaba.steven@yahoo.com		0788850214
HAKIZIMANA Alphonse	(District Revenue Officer			0788635131
UWIRAGIYE Venan	District Forest Officer	venuwiragi@yahoo.fr		0788847426
MUSANZE				
UMUTONI MONIQUE	DEF	Monicau2003@yahoo.fr	0788544779	
RUZINDANA Charles	District planner	Musanze District	0788546574	Kajulie80@yahoo.fr
NDAGIJIMANA Jean Pierre	District Environment Officer	Musanze District	0788426438	ndagipket@yahoo.fr
HAKIZIMANA Francois	Professional in charge of Infrastructures	Musanze District	0788552005	Hakizafr2003@yahoo.fr
HATEGEKIMANA Bonaventure	District taxes collection officer(Receveur du District)	Musanze District	0788622909	bonhateg@yahoo.fr
HABINSHUTI Anaclet	Permanent Secretary of JADF	Musanze District	0788822439	habanacle@yahoo.fr
MUSONI Protails	District Forest Officer	Musanze District	0788448493	musoprotails@yahoo.fr

Ngororero				
BIMENYIMANA REMY	DEF	remytonto@gmail.com	0788864413	
UWINGOGA Christophe	Director of finance At Ngororero		0788527458	
SEBITEREKO Bustani	District Environment officer		0788940904	bustancn@yahoo.fr
KAYITSINGA Jean	District Forest officer		0788550383	kayijano@yahoo.fr
BENIMANA Alexis	Disrict Agronomist		0788356778	abenimana@yahoo.fr
MUGABO Pacifique	District revenue officer			mpnkanika@yahoo.fr
MAPENDANO J.M.V	Integrated Watershed Management /Sebeya Program agent		0788657078	mpi@yahoo.fr
TURAHIMANA Ferdinand	PS DJAF		0788400332	turahimana@yahoo.fr
RUTUNGANYA J.M.V	Accountant		0788401126	rutunganyaildephonse@yahoo.fr
Nyabihu				
NABIMANA JEAN D	DEF		0788696126	
NSENGIYUMVA Jean Damascène	President	TURWANYE ISURI Cooperative CLED	0788989758	
NIYOYITA Khamisi	President	Teralgiti Cooperative	0783806047	
KARIBUSHI HABIMANA P. Celestin	Local revenue officer	District	0788835532	hkaribushi@yahoo.fr
NYIRIMANZI Jean Pierre	Agriculture Officer	District	0788806266	ipeternzi@yahoo.fr
KARAMBIZI Benjamin	Environment Officer	District	0788688667	bkarambizi@yahoo.fr
MUKAMURENZI Beatrice	President	COATKA	0788752207	
UWIZEYIMANA Emmanuel	Director of Planning and Monitoring	District	0788582768	emmuwi@yahoo.fr
NZITATIRA Olivier	Chief Accountant	District	07888865696	nzitolver@yahoo.fr
Jean de Dieu NABIMANA	District environment Facilitator	REMA	0788696126	nabimana@gmail.com
Nyagatare				
HAFASHIMANA J. CLAUDE	DEF		0788822928	
Kayumba Eugene	District Revenue collection	District	0788566374	Kayumba.eugen@yahoo.com
Francois Byinshi	Director of planning of Nyagatare district	District	0788352824	frabyinshi@yahoo.fr
Alphonse Rutanana	Director of Finance	District	0780493324	arutanana@yayoo.com
Uzahirwatheogene	Monitoring and Evaluation	RSSP	0788840574	uzahirwa@yahoo.fr
Ndungutse Charles	Livelihood officer	ADRA/ Nyagatare	078880142	charlesndungutse@yaoo.com
Ayabagabo Christophe	Fielf coordinator	RDO/Nyagatare District	078404512	ayabochris@yahoo.fr
Kayumba Eugene	District Revenue collection	District	0788566374	Kayumba.eugen@yahoo.com
Nyamagabe				
NYIRANZIZA ROSETTE	DEF		0788878329	
Karemera Jean de Dieu	Director Planning		0788517142	karemerajdd@yahoo.fr
Mukantampaka Anita	Accountant		0788868758	anintampa@yahoo.fr
Abarikumwe Cyprien	Revenue Officer		0788843362	abarikumwe@yahoo.fr
Karangwayire Ancille	Environment officer		0788752504	akarangwayire@yahoo.fr

Gashema Jean Claude	JADF		0788420681	Jeanclaudegashema
Nyamasheke				
BYUKUSENGE PRISCA	DEF		0788812628	
Niyoyita Come	Director planning		0785813848	Cosima2020@yah00.fr
Bikorimana Silas	Budget Officer		0788411404	bikorasilas@yahoo.fr
Havugimana Vincent	Revenue officer		07884680	havugimanavincent@yahoo o.fr
Ntawukirabizi Innocent	District forest officer		078871363	Ntawukirainnocent@yahoo .com
Nyaruguru				
KABALISA APPOLON	DEF		0788513147	
Alphonse IYUMVA	Local Revenue Collection Officer		0788457266	iyumva@nyaruguru.gov.rw
Martin KANAMUGIRE	The former planner of District		0788540750	kamaryus@yahoo.com
Nelson MUHAYIMANA	Planner of District		0788626903	muhayimananelson@yahoo o.com
Modeste NTABOMVURA	Budget Officer		0788929998	ntabomvura@nyaruguru.g ov.rw
Thomas MBONYINSENGE	District Agronomist		0788409898	Mboth02yahoo.fr
Anselme HARELIMANA	District Environment Officer		0788581830	anselmeha@gmail.com
Rubavu				
MFITUMUKIZA JEAN	DEF		0788220194	
Haguma Pascal	Director of Plannification		07376386	hagumapascal@yahoo.fr
Harelimana Innocent	Environment Officer		0788776202	lharelimana3@yahoo.fr
Hodari Adrienne	Budget Officer		0788479187	Hodariad2001@yahoo.fr
Habimana Aroan	Tax collector		0788660631	habadelic@yahoo.fr
Senzoga	JAF		0788830376	Esenzoga@yahoo.com
Mwemezi Assuman	Forest Officer		0788512531	assumanimwemezi@ yahoo.fr
Nzabonimpa Anselme	Coordinator	BAIR	0788523126	anselmenza@yahoo.fr
Ndakemwa Moses	Coordinator	AKAPE	0788511989	Nakemoses@gmai.com
Birori Synese	Tax Collector		0788419373	Syneseb@yahoo.fr
Ruhango				
KAYITESI ANN MARIE	DEF		0788224519	
UwimanaPieereClaver	Environment and Water Officer		0788481202	
Ntaganwa Jean Claude	District Forest Officer		0788524478	
Twihangane Daniel	Coordinator of REOCAW		0784433939	
TwagiramunguAnastase	Revenue Inspector		0788570181	
Burezi Eugene	Permanent secretary of JADF		0788583151	
Rulindo				
RAMUNI EARNEST	DEF		0788439436	
Kurujyibwami Celestin	Accountant		0788778163	kulucele@yahoo.fr
Indayigaya Emmanuel	Local Revenue Collection		0788760368	Siemmanu2005@yahoo.fr
Nshimiyimana Abdul Karim	Director of Planning		078877156	Abdul03@yahoo.fr
Munyandinda Jean Bosco	Environment Officer		0788806170	bmunyandinda@yahoo.fr
Ndikubwimana Laurent	Forest Officer		0788465788	ndikubwimanalaurent@ya hoo.fr
Rusizi				
Musabyimana Ferdinand	DEF		0788521883	
Ephrem Nsengiyuma	Local Revenue		0788415971	

Alexis Uwimana	Budget Officer		078864330	
Habiyaremye Emmanuel	Direct Planning and Monitoring		0788527172	
Nsabimana Ezechiel	District Environmental Officer		0788414329	
Niyitegeka Sevand	DEMP Field Environmentalist		0788627905	
Rutsiro				
NDEKEZI AUGUSTIN	DEF		0788540241	
Havugimana Etienne	Director of PM	District	0783559122	Havugati02@yahoo.fr
Uwiringiyimana William	Verificateur des impots	District	0783308477	uwiriwilliam@yahoo.fr
Majyambere Moustapha	Representative EFECO	EFECO	0788305740	
Munyabera Venuste	Coordinator of RCBP (Rutsiro construction Biogas and plumbing)	RCBP	07803027649	
Turamyé Syvelien	DFO	District	0788752673	
Mugwaneza Jean Bosc	DEMP coordinator	District (Karongi Rutsiro)	0788613723	
Bimenyimana Antoine	Comptable KOABIMU	KOABIMU	0785400727	
Thierry Aimable	Coordinator, Forest of hope Association	FHA	0783491512	thierryaimable@yahoo.fr
Ndayishimye Melane	Agronome du Distri ct	District	0788591176	
KABANDA M Olivier	DEWO	District	0788453248	kabamaol@yahoo.fr
Rwamagana				
NGIRABAKUNZI OCTAVIEN	DEF		0788696007	
RWAKAYIGAMBA Emmanuel	District Environmental Officer			
MUKAGISAGARA Eugenie	District Forest Officer			
MUNYANEZA Pascal	District Budget Officer			
MUTIGANDA Ally	District Revenues Officer			
KAYIRANGA Paul	Director of planning M&E			
NSABIMANA Patrick	District DEMP (II) Officer			
UKIZURU Innocent	District Agriculture Officer			

Annex 3: List of participants to the Validation Workshop 24th October 2013,**HOTEL UMUBANO**

Nº	NAMES	INSTITUTION	FUNCTION	TELEPHONE
1	Cornelius KAZORA	Consultant	Consultant	
2	NDAMAGE Jean	Kucukiro district	DEF	
3	NSEKANABANGA J.D.A	Karongi distric	DEF	078868803
4	BANIGYE PELA	Gasabo district	DEO	0788303823
5	NAYIGIZIKI Eulade		DSO	0785419386
6	NDAYISHIMIYE Noel	Gisagara dISTRIC	DEF	0788680019
7	MFITUMUKIZA J.D.	RUBAVU District	DEF	0788220194
8	NIZEYIMANA Aime Adrien	RITSIRO II	DSO	0788873199
9	BARIGIRA J. P.	BURERA II	DSO	0788478352
10	BYUKUSENGE Prisca	NYAMASHEKE	DEF	0788812628
11	HARERIMANA Innocent	MUHANGA	DSO	0788839093
12	GASASIRA Jacques	NYAMASHEKE	DSO	0788556883
13	NTIRENGANYA J. B	DEF		0788787847
14	NSHIMIYIMANA Christophe			0783348183
15	HABIYAMBERE Apollinaire	NYARUGENGE	STATISTICIEN	0788433942
16	HAFASHIMANA J. C		DEF	0788822928
17	HABYARIMANA Protais		STATISTICIEN	0788687883
18	MBONIGABA Theoneste		DEF	07888603106
19	HARERIMANA Innocent		DEO	0788776202
20	GAHAMANYI j. p		DEF	0783579858
21	NDAGIJIMANA J.P		DEO	0788426438
22	MUTEMBEREZI Paulin		DAF	0788425543
23	UWAMAHHORO J.B	NYABIHU District	DSO	IRAPFUYE
24	NDEREZI Augustin		DEF	0788540241

25	NDAMAGE Jean		DEF	0788533043
26	Alfred MAHIRWE	MINALOC	DVPT EXPERT	0788663024
27	EDOUARD NIYONKURU	V.K	DEF	0788871365
28	Laurent MUGABO	GISAGARA	RENUE Officer	0788886532
29	NABIMANA J.de D.		DEF	0788626123
30	KAYITESI ANNE Marie		DEF	0788224519
31	NGIRABAKUNZI Octavien		DEF	0788698009
32	MANIRAFASHA Sylvestre		DEF	0788555695
33	UMUHOZA Perpetue		DEF	0788510350
34	SALAMA Fides		DEF	0788555670
35	BIMENYIMANA Remy		DEF	0788864413
36	Bernardin BAVUGE		DEF	0788443796
37	KABANDA Claude		DEF	0788417857
38	MWISENEZA Jonas		DEWO	0788771016
39	HAKIZIMANA Samuel		DEF/REMA	0788873008
40	DUSABEYEZU Anastase		PSF	0788483590
41	BRUCE MUSONI	PSF	DEF	0788559928
42	UMULISA Yvone		MINICOFIN	0788821959
43	NZABAMWITA Gaspard		KIST	0785269399
44	NIRINGIRE Gustave		DEF	0788774860
45	MUSONI Protais	MUSANZE Distric		0788448493
46	MUNYANEZA Festus		statisticien	0788476305
47	BITITI Fred		DEF	0788473716
48	MUDUDA Fred		statisticien	0788735479
49	MURENZI Samuel		DEO	0783589143
50	BIRAGO DEOP		Statisticien	0783597268
51	MUKARUKUNDO E		DEF	0788607943
52	TWAHIRWA Christian	MINICOM		0788682270

53	NTWARI B Natan	MIDIMAR		0788623867
54	ROSETTE NYIRANZIZA	NYAMASHEKE	DEF	0788878329
55	HATEGEKIMANA Diedone		Statisticien	0786210556
56	TUYISHIME NGONDO Modest		Statisticien	0788491960
57	IRAGENA Philbert	MININFRA	DEF	0788518611
58	HISHAMUNDA Alphonse	MINIRENA		0788899486
59	KAMAYIRE J. P		MININFRA	0788965157
60	J.C HAKIZIMANA		NISR	0788523417
61	RAMUNI Erenest	RULINDO	DEF	0788439436
62	Apophia BORAMUNGU	MIDIMAR		0782837195
63	MUSABA OTES	RNRA		0788857579
64	RUTARO BENON KAKA	MINIRENA		0786689123
65	BYAYEZU K Natan	RNRA		0786422422
66	KAMUGISHA Emmanuel		MINEAC	0785158293
67	NIRAGIRE Henriette	RNRA	DEF	0788828215
68	AARON MURAGIJIMANA		Budget Officer	0788278011
69	HABYARIMANA MUPANDA	Consultant Chamber art&crops	Consultant	0788757407
70	MUNYANEZA Pascal		Budget Manager	0788225985
71	NDAHIMAGE Celestin		CBEC Estate	0783258586
72	MUSENGIMANA Eric		CBE Planning	0783279138
73	MUSABYIMANA FERDINAND	RUSIZI	DEF	0788521883
74	NZABANDORA J.D	RUSIZI	ICT Planing	0788551314
75	BENIMANA Theogene		Ag director PM&E	0788883424
76	KAWERA Clarisse	REMA	PRD	
77	NIYONGABO Richard	FONERWA	M&E Specislist	
78	MBERA Olivier	RRECPC	National Expert	
79	WASSWA Grastian	NEWTIMES	REPORTE	

80	BUSOKEYE M.L	REMA	DIR/ BREPD	
81	DUHUZE Remy	REMA	DIR/ERPC	
82	MUNYAZIKWIYE Faustin	REMA	DIR/DECIO	
83	NGABO Theogene	REMA	EMO	
84	NTABANA Alphonsine	REMA/SPIU	Ag SPIU Coord	
85	NTUNGANE Alain	EWSA	Financial	
86	Madeleine nyiranzi	WCS	MES Manager	
87	HABIYAKARE Apollinaire	GICUMBI	Planner	
88	SAKUFI Dismas	GICUMBI	DEF	
89	Chantal UMURAZA	RCI Chamber	Director	
90	MANIRAGABA Abins	INLLAK	Ag Dean	
91	KWIZERA Dinah	K C	EDPRS	
92	KABEJA CRISPIN	MINALOK	DEF	
93	Steven NIYONZIMA	RRECPC	National Coord	

Annex 4: Revenue sources from ENR by Districts

Year	2008	2009[mini]	2009/2010	2010/2011	2011/2012	Total
BUGESERA DISTRICT						
(i) Sub soil assets(Sands and quarries, etc)	29,780,000	39,889,580	32,743,400	38,007,900	0	
(ii) Location of water (lakes and rivers) for fishing	9,621,875	2,004,535	2,288,100	2,305,700	5,439,255	
(iii) Location of water(lakes and rivers) for transport	0	4,854,430	7,478,930	0		
(iv) Land location					5,842,047	
(v) Brick yard licensing fees					92,000	
Subtotal for ENR	39,401,875	46,748,545	42,510,430	40,313,600	11,373,302	180,347,752
Total internal revenue for district	248,237,618	167,228,851	328,019,880	652,419,750	622,309,905	2,018,216,004
% of ENR revenue to total revenue	15.9	28.0	13.0	6.2	1.8	8.9
BURERA DISTRICT						
(i) Land taxes: permits issuing, construction permits.			1,403,429	3,986,682		
(ii) Taxes on transport forest products				3,095,790	2,294,100	
(iii) Rent of public administrative land exploited wet lands	6,944,000		7,355,600	8,981,407	10,026,770	
(iv) Mine and quarry prospection fees and transport of material from quarries	2,040,000	1,346,000	2,969,400	3,400,000	4,848,177	
Subtotal for ENR	8,984,000	1,346,000	11,728,429	19,463,879	17,169,047	58,691,355
Total internal revenue for district	128,579,081	96,987,878	174,165,324	217,421,018	370,029,837	987,183,138
% of ENR revenue to total revenue	7.0	1.4	6.7	9.0	4.6	5.9
GAKENKE DISTRICT						
(i) Forest				871,050	168,000	
(ii) Mining			5,624,354	5,731,137	6,532,942	
Subtotal for ENR			5,624,354	6,602,187	6,700,942	18,927,483
Total internal revenue for district		180,000,000	250,000,000	349,000,000	401,350,116	1,180,350,116

% of ENR revenue to total revenue			2.2	1.9	1.7	1.6
GASABO DISTRICT						
(i) Quarrying activities and related taxes	127,654,375	45,596,210	98,529,621	121,927,093	140,719,939	
(ii) Fines for environmental degradation			126,000	297,000	854,000	
Subtotal for ENR	127,654,375	45,596,210	98,655,621	122,224,093	141,573,939	535,704,238
Total internal revenue for district	2,305,194,885	2,324,673,845	3,216,056,576	4,471,129,940	5,596,247,187	17,913,302,433
% of ENR revenue to total revenue	5.5	2.0	3.1	2.7	2.5	3.0
GATSIBO DISTRICT						
(i) concession mines					53,010,551	
(ii) public cleaning services			71,161,039	294,105,255	185,960,160	
(iii) transport of woody products						
(iv) tree harvesting						
(v) quarries exploitation						
Subtotal for ENR			71,161,039	294,105,255	238,970,711	604,237,005
Total internal revenue for district	181,698,675	104,223,951	148,381,624	294,105,852	419,846,832	1,148,256,934
% of ENR revenue to total revenue			48.0	100.0	56.9	52.6
GICUMBI DISTRICT						
(i) licenses to exploit sub-soil assets	249,970	1,611,000		14,415,224	925,950	
(ii) Forests taxes		9,346,955	5,974,895		25,462,035	
(iii) Marshlands letting		745,870	1,525,800	1,525,800	457,100	
(iv) Use of public water(Fishermen)				32,000		
(v) Mines and Quarries		788,000	40,000			
Subtotal for ENR	249,970	12,491,825	7,540,695	15,973,024	26,845,085	63,100,599
Total internal revenue for district	582,599,030	262,579,506	665,350,486	375,542,839	539,413,571	2,425,485,432

% of ENR revenue to total revenue	0.0	4.8	1.1	4.3	5.0	2.6
GISAGARA DISTRICT						
(i) Revenue collected from quarries exploitation			2,849,400	6,973,170	8,999,600	
(ii) Revenue collected from forest exploitation				1,067,409	245,590	
Subtotal for ENR			2,849,400	8,040,579	245,590	11,135,569
Total internal revenue for district			204,530,067	235,332,931	252,246,128	692,109,126
% of ENR revenue to total revenue			1.4	3.4	0.1	1.6
HUYE DISTRICT						
(i) Mining and quarries			11,590,000	7,200,000	27,369,455	
(ii) Forest fees (transport)						
(iii) Marshlands location					9,722,361	
Subtotal for ENR			11,590,000	7,200,000	37,091,816	55,881,816
Total internal revenue for district	400,204,330	400,512,431	418,808,435	487,502,228	688,434,363	2,395,461,787
% of ENR revenue to total revenue			2.8	1.5	5.4	2.3
KAMONYI DISTRICT						
(i) Land	20,953,650		4,579,810			
(ii) Licenses to exploit sub-soil assets	55,282,500				1,746,442	
(iii) Tax on property-plots and land				271,332	16,021,312	
(iv) Rent of public administrative land				13,420,824	50,420,010	
(v) Public cleaning services fees			9,781,138	35,525,142		
Subtotal for ENR	76,236,150		14,360,948	49217298	68187764	208,002,160
Total internal revenue for district	281,234,996		268,530,544	261,107,004	352,621,233	1,163,493,777
% of ENR revenue to total revenue	27.1		5.3	18.8	19.3	17.9
KARONGI DISTRICT						
(i) Transport permit of wood products	1,000,000	1,200,000	1,800,000	2,389,000	2,134,350	
(ii) Quarries revenues	0	311,495	606,860	660,000	600,000	

(iii) Marshland location fees	0	0	0	1,520,000	1,520,660	
Subtotal for ENR	1,000,000	1,511,495	2,406,860	4,569,000	4,255,010	13,742,365
Total internal revenue for district	250,000,000	295,000,000	340,000,000	400,000,000	460,000,000	1,745,000,000
% of ENR revenue to total revenue	0	1	1	1	1	1
KAYONZA DISTRICT						
i) Mining and quarry exploitation	0	0	0	0	8,136,729	
Subtotal for ENR					8,136,729	8136729
Total internal revenue for district					372,691,504	372,691,504
% of ENR revenue to total revenue					2.2	2.2
KICUKIRO DISTRICT						
(i) Mine and Quarry Permit or Concuss fees	60,000	60,000	60,000	50,000	90,000	
(ii) Mine or Quarry protection fees	720,000	980,000	1,000,000	700,000	1,200,000	
(iii) Penalties	-	480,000	450,000	500,000	700,000	
(iv) Fines for brick making	-	-	-	700,000	1,300,000	
(v) Forest harvesting permission fees	200,000	400,000	1,050,000	1,800,000	2,200,000	
Subtotal for ENR	980,000	1,920,000	2,560,000	3,750,000	5,490,000	14,700,000
Total internal revenue for district	1,510,689,087	998,425,145	2,006,726,682	3,277,498,891	4,212,996,474	12,006,336,279
% of ENR revenue to total revenue	0.1	0.2	0.1	0.1	0.1	0.1
KIREHE DISTRICT						
(i) Forest	1,256,850	1,115,654	2,568,790	3,142,540	4,654,741	
(ii) Mining and Quarry	3,652,500	4,535,200	5,587,300	6,256,438	6,868,480	
(iii) Penalties	8,253,560	3,583,200	2,580,780	2,270,800	2,320,250	
Subtotal for ENR	13,162,910	9,234,054	10,736,870	11,669,778	13,843,471	58,647,083
Total internal revenue for district	173,405,039	175,750,800	367,705,948	473,015,329	514,096,000	1,703,973,116

% of ENR revenue to total revenue	7.6	5.3	2.9	2.5	2.7	3.4
MUHANGA DISTRICT						
(i) Fees charged on public cleaning services	27,641,889	22,144,835	42,370,150	35,414,998	49,224,505	
(ii) Concession for mines	7,258,263	2,281,151	2,615,735	1,422,081	5,244,465	
(iii) Quarry prospection	587,510	6,532,820	12,148,289	16,461,280	11,890,486	
(iv) District Forest purchased	3,459,000	2,935,250	3,300,425	3,075,900	12,996,950	
(v) Land registration fees	30,395,947	23,302,706	23,357,595	23,813,523	36,008,091	
Subtotal for ENR	69,342,609	57,196,762	83,792,194	80,187,782	115,364,497	405,883,844
Total internal revenue for district	276,201,382	213,606,764	343,202,585	378,095,360	445,201,089	1,656,307,180
% of ENR revenue to total revenue	25	27	24	21	26	25
MUSANZE DISTRICT						
(i) Harvesting permit	83,000	50,000	87,000	110,000	156,000	
(ii) Transport permit						
(iii) Fines on forest degradation						
(iv) quarries (sand, rocks, soil, bricks)	7,000,000	5,300,000	9,600,000	19,000,000	36,000,000	
(v) transport of quarry products (sand, rocks, soil, bricks)						
Subtotal for ENR	7,083,000	5,350,000	9,687,000	19,110,000	36,156,000	77,386,000
Total internal revenue for district	411,816,922	254,626,412	446,656,316	549,937,634	906,834,369	2,569,871,653
% of ENR revenue to total revenue	1.7	2.1	2.2	3.5	4.0	3.0
NGOMA DISTRICT						
(i) Mining and quarrying			4,612,610	6,231,310	8,750,000	
Subtotal for ENR			4,612,610	6,231,310	8,750,000	19,593,920
Total internal revenue for district	243,693,826	368,915,537	400,976,825	543,215,160	580,815,925	2,137,617,273
% of ENR revenue to total revenue	0.0	0.0	1.2	1.1	1.5	0.9
NGORORERO DISTRICT						

(i) Minerals(prospection and exploitation)	1,063,780	986,216	1,024,540	2,953,515	3,360,000	
(ii) Sand and stones for building	426,790	319,480	400,207	978,583	1,254,560	
(iii) Forest and forest products	1,389,216	801,415	821,316	2,067,354	2,350,005	
Subtotal for ENR	2,879,786	2,107,111	2,246,063	5,999,452	6,964,565	20,196,977
Total internal revenue for district	128,466,330	96,856,400	192,247,905	280,450,715	320,675,955	1,018,697,305
% of ENR revenue to total revenue	2.2	2.2	1.2	2.1	2.2	2.0
NYABIHU DISTRICT						
(i) Mining and quarry	3,600,000	2,100,000	4,500,000	4,500,000	7,200,000	
(ii) Revenue fees from forest	600,000	500,000	1,100,000	1,320,000	1,468,000	
(iii) Revenue fees for cleaning activities	8,908,500	7,470,000	16,453,300	27,168,700	34,555,000	
Subtotal for ENR	13,108,500	10,070,000	22,053,300	32,988,700	43,223,000	121,443,500
Total internal revenue for district	398,767,173	79,341,458	179,081,279	247,248,862	324,359,862	1,228,798,634
% of ENR revenue to total revenue	3.3	12.7	12.3	13.3	13.3	9.9
NYAGATARE DISTRICT						
(i) License to exploit subsoil assets			627,000	1,049,600	2,307,740	
(ii) Mine and quarry permit or concession fees					1,317,620	
(iii) Mine and quarry prospection fees and transport of materials from quarries and forest					86,700	
(iv) Brick yard licensing fees					25000	
(v) Mine and quarry						
Subtotal for ENR			627,000	1,049,600	3,737,060	5,413,660
Total internal revenue for district		215,311,257	388,046,419	430,870,343	680,572,113	1,714,800,132
% of ENR revenue to total revenue		0.0	0.2	0.2	0.5	0.3
NYAMAGABE DISTRICT						
(i) Forests (forest purchased, degradation punishments	67,947,152	49,875,196	100,185,498	115,318,063	167,113,513	
Subtotal for ENR	67,947,152	49,875,196	100,185,498	115,318,063	167,113,513	500,439,422

Total internal revenue for district	251,656,117	175,616,888	319,367,222	338,573,291	445,992,828	1,531,206,346
% of ENR revenue to total revenue	27.0	28.4	31.4	34.1	37.5	32.7
NYAMASHEKE DISTRICT						
(i) Rent of Public administration land		13,832,500	14,726,555	27,984,255	22,422,425	
Subtotal for ENR	-	13,832,500	14,726,555	27,984,255	22,422,425	78,965,735
Total internal revenue for district	0	226,715,932	416,675,386	466,946,883	542,628,124	1,652,966,325
% of ENR revenue to total revenue		6.1	3.5	6.0	4.1	4.8
NYARUGENGE DISTRICT						
Subtotal for ENR						
Total internal revenue for district						0
% of ENR revenue to total revenue						
NYANZA DISTRICT						
Subtotal for ENR						
Total internal revenue for district						0
% of ENR revenue to total revenue						
NYARUGURU DISTRICT						
(i) Permits of Transporting forest products and fines	25,734,315	12,912,257	27,962,488	28,982,703	24,834,336	
(ii) Permits of quarries exploitation and fines	2,300,860	1,032,720	2,138,500	2,459,415	3,170,500	
Subtotal for ENR	28,035,175	13,944,977	30,100,988	31,442,118	28,004,836	131,528,094
Total internal revenue for district	210,486,320	118,485,388	204,648,120	216,270,111	270,700,042	1,020,589,981
% of ENR revenue to total revenue	13.3	11.8	14.7	14.5	10.3	12.9
RUBAVU DISTRICT						
(i)forest exploitation(timber, charcoal and cutting trees)				375,000	1,206,000	
(ii)Mining and quarries		1,000,000	3,000,000	23,600,000	32,457,000	
(iii)Burning of tiles and bricks						
(iv)Deterioration of rivers and Kivu lake shores						

(v)use of plastic bag						
Subtotal for ENR		1,000,000	3,000,000	23,975,000	33,663,000	61,638,000
Total internal revenue for district	493,012,422	375,866,694	828,373,112	842,491,401	1,006,753,807	3,546,497,436
% of ENR revenue to total revenue		0.3	0.4	2.8	3.3	1.7
RUHANGO DISTRICT						
(i) Mining fees collected	0	0	0	300,000	900,000	
(ii) Transport of forest product	2,500,000	3,000,000	3,200,000	3,800,000	3,750,000	
(iii) Location of quarries sites	400,000	420,000	480,000	550,000	640,000	
(iv) Burning brick and tiles	300,000	410,000	480,000	530,000	800,000	
Subtotal for ENR	3,200,000	3,830,000	4,160,000	5,180,000	6,090,000	22,460,000
Total internal revenue for district	198,986,496	246,768,231	289,745,895	315,243,612	375,385,513	1,426,129,747
% of ENR revenue to total revenue	1.6	1.6	1.4	1.6	1.6	1.6
RULINDO DISTRICT						
(i) Mine and quarry permit fee						
(ii) mine, quarry prospection and transport of material	6,236,000	7,912,000	7,961,239	8,563,240	10,456,000	
(iii) Brick yard licensing fee	16,250,000	14,000,000	11,850,000	17,163,000	19,000,000	
(iv) Hygiene and cleaning	56,004,200	18,500,000	17,350,000	20,150,000	23,000,000	
(v) Boundaries mark fees	14,250,000	68,128,420	7,300,800	5,976,200	65,100,000	
Subtotal for ENR	92,740,200	108,540,420	44,462,039	51,852,440	117,556,000	415,151,099
Total internal revenue for district	273,271,416	143,974,329	280,524,290	200,025,022	196,688,058	1,094,483,115
% of ENR revenue to total revenue	33.9	75.4	15.8	25.9	59.8	37.9
RUSIZI DISTRICT						
(i) Bricks yards licencing fees						

		305,000	877,500	1,642,850	8,000,000	
(ii) Mine and quarries prospection fees		747,000	1,504,720	4,860,000	7,020,000	
(iii) Mine and quarries permit or concession fees		4,500,000	7,000,000	36,849,570	101,481,170	
Subtotal for ENR		5,552,000	9,382,220	43,352,420	116,501,170	174,787,810
Total internal revenue for district		300,302,437	423,794,102	638,147,603	909,554,404	2,271,798,546
% of ENR revenue to total revenue		0.0	0.0	0.1	0.1	0.1
RUTSIRO DISTRICT						
(i) District Forest purchased	0	0	0	8,000,000	13,000,000	
(ii) Transport of forest product	2,000,000	2,600,000	2,700,000	2,800,000	3,000,000	
(iii) Fines in use of Kaningini in fishing	200,000	120,000	400,000	100,000	120,000	
(iv) location of quarries sites	300,000	350,000	420,000	580,000	610,000	
(v) Burning brick and tiles	120,000	200,000	600,000	700,000	1,000,000	
Subtotal for ENR	2,620,000	3,270,000	4,120,000	12,180,000	17,730,000	39,920,000
Total internal revenue for district	158,693,826	164,915,537	172,976,925	175,000,000	208,000,000	879,586,288
% of ENR revenue to total revenue	1.7	2.0	2.4	7.0	8.5	4.5
RWAMAGANA DISTRICT						
(i) District Forest purchase	0	0	0	7,107,350	4,119,040	
(ii) Mining and quarries assets	8,393,863	5,792,600	23,068,980	33,260,280	17,364,161	
Subtotal for ENR	8,393,863	5,792,600	23,068,980	40,367,630	21,483,201	99,106,274
Total internal revenue for district	292,092,348	177,274,786	346,528,224	425,406,697	547,703,093	1,789,005,148
% of ENR revenue to total revenue	2.9	3.3	6.7	9.5	3.9	5.5
Total by year by ENR	563,019,565	399,209,695	637,949,093	1,080,347,463	1,324,642,673	4,005,168,489
Total by year for all Revenue	9,398,987,319	8,163,960,457	13,621,120,171	17,541,998,476	22,564,148,332	71,290,214,755

% of Total ENR by All Revenue	6.0	4.9	4.7	6.2	5.9	5.6
Average for 28 Districts for ENR only						143,041,732
Average for 28 Districts for all Revenues						2,546,079,098

Annex 5: Districts' expenditure for environmental, natural resources and climate change interventions 2008-2012

DISTRICT	2008	2009 mini	2009/2010	2010/2011	2011/2012	
BUGESERA						
(i)Water hyacinths eradication 30 Ha in Rivers and lakes	12,000,000	12,000,000	12,000,000	12,000,000	12,000,000	
(ii)Construction of 750 valley dams rain water harvesting		100,000,000	300,000,000	300,000,000	50,000,000	
(iii)2000 Ha of radical terracing for erosion control	400,000,000	400,000,000	400,000,000	400,000,000	400,000,000	
(iv)10 000 000 Tree planting and Planting 2 000 000 trees of Agroforestry tree species	900,000,000	35,000,000	35,000,000	35,000,000	35,000,000	
(v) Exploitation study of peat and installation of exploitation units in Rwabusoro		200,000,000	200,000,000	200,000,000	200,000,000	
Subtotal	1,312,000,000	747,000,000	947,000,000	947,000,000	697,000,000	4,650,000,000
BURERA						
(i) Sanitation construction		20,615,480				
(ii) Sustainable management of ecosystems for income generation (No budget given)						
(iii)To plant erosive anti-grasses (Graminees and the tree on the hills and mountains				200,070,000		
(iv)To plant and maintain the plants					120,412,800	
(v) Increasing forestry resources		175,000,000				
(vi)Mines and quarries inspection No budget given)						
(vii)To plant the agro trees on 69 hectors radical and progressive terracing in sector (VUP)				242,398,000		
(viii) To construct new ecosans /Sanitations					46,971,996	
(ix)Efficient use of forestry resources to provide energy ,generate income and support livelihood(No budget given)						
(x)To reconvert 100 hectors of forestry degraded				200,062,000		
(xi)To popularize the biogas systems					34,950,000	

(xii)Management of forestry resources (No budget given)						
(xiii)To plant the forest and agro trees forest on 180km roadsides				50,075,000		
(xiv)To plant and disseminate 5000 fruits trees					20,000,000	
(xv)Pollution management			37,040,792			
(xvi)To facilitate the granting of license of quarrying and mining exploitation				200,000		
(xvii)To protect wet zones					1,000,000	
Subtotal	0	195,615,480	37,040,792	692,805,000	223,334,796	1,148,796,068
GAKENKE						
(i)Soil erosion control by terraces	586,270,000	165,462,396	183,661,400	15,842,793	2,140,000	
(ii) Afforestation	48,000,000	426,964	65,738,512	71,652,739		
(iii) Protection of river bank ,and lakeshore by tree and reeds and bamboos planting	277,000	523,956	443,956	36,359,739		
(iv) Biogas construction	2,258,300	182,000	8,500,000	-		
Subtotal	636,805,300	166,595,316	258,343,868	123,855,271	226,474,796	1,412,074,551
GASABO						
(i) Promoting the utilization of alternative sources of energy : Biogas ,briquettes from domestic products waste			71,000,000			
(ii) Develop green zones on major roads				70,600,000		
(ii) Soil erosion control		30,150,000				
(iv) Increasing forest cover					26,000,000	
(v) Protection of marshlands	13,326,500					
Subtotal	13,326,500	30,150,000	71,000,000	70,600,000	26,000,000	211,076,500
GATSIBO						

(i) Tree nursery preparation (740,000 seedlings)	23,857,082	23,857,082			23,857,082	
(ii) Bench terracing 75ha at Kizigro sector			94,413,100			
(iii) Bench terracing 100ha at Gassnge sector				82,021,500		
(iv) Anti Erosive Trenches 300ha at Gasange sector					70,227,500	
(iv) Muhazi lakeshores by REMA/DEMP (No budget given)						
(v) Evacuation of jacinth EAU in Muhindi lake			48,297,860			
(vi) Study of IDP model villages at kiziguro sector				142,447,834		
vii Bench terracing 100ha at Kageyo sector					223,571,100	
(viii) Muhazi lakeshores by REMA /DEMP (No budget given)						
(ix) Ant-Erosive trenches at Gasange sector				13,293,600		
(400) ha of Anti-Erosive Trenches at Murambi Sector					84,111,500	
(x) Muhazi lakeshores by REMA/DEMP						
(xi) Making 38 water ponds at Kiziguro & Gasange sectors				60,128,932		
(xii) Muhazi lakeshores by (No document given)						
(xiii) 400ha of Anti Erosive				79,230,000		
(xiv) Biogas digesters (No budget given)						
Subtotal	23,857,082	23,857,082	142,710,960	377,121,866	401,767,182	969,314,172
GICUMBI						
(i) Agro-forestry and forestry tree plantation	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000	
(ii) Radical terraces (840ha per year)						

	643,000,000	643,000,000	643,000,000	643,000,000	643,000,000	
(iii) Progressive terraces (60ha per year and sector	501,000,000	501,000,000	501,000,000	501,000,000	501,000,000	
(iv) Anti-erosive ditches (20ha per year and sector	21,000,000	21,000,000	21,000,000	21,000,000	21,000,000	
(v) Biogas use (in secondary schools ,prison	500,000,000	500,000,000	500,000,000	500,000,000	500,000,000	
Subtotal	1,765,000,000	1,765,000,000	1,765,000,000	1,765,000,000	7,060,000,000	14,120,000,000
GISAGARA						
(i) Progressive terraces making	30,000,000	32,000,000	35,000,000			
(ii) Radical and progressive terraces making				105,000,000	115,000,000	
(iii) Trees planting	21,500,000	24,500,000				
(iv) To increase the surface covered by forest			21,000,000	24,000,000	24,500,000	
(v) Solar energy installation cells, offices	22,000,000					
(vii) Protecting Akanyaru				24,000,000		
(viii) construction of 27 biogas digesters					1,625,000	
Subtotal	73,500,000	56,500,000	56,000,000	153,000,000	141,125,000	480,125,000
HUYE						
(i) Management of forest resources	59,236,000		37,900,000			
(ii)planting 2500000 plants		14,727,344				
(iii) Management of resources :planting 770000 trees				30,851,391		

(iv) Erosion control kadahokwa river banks protection and ravine rehabilitation					65,635,600	
(v) performance productivity and value addition in the mining sector enhanced and based on enviromentally sustainble practices	800,000					
(vi) polution management	44,490,000	13,360,350	37,040,792			
(vii) Feasibility study to protect all ravines				22,342,163		
(viii) Tree plantation (No budget given)						
(ix) Access to hygienic sanitation services	6,600,000					
(x) Management of water resources		900,000				
(xi) Cleaning Public places				33,759,322		
(xii) construction of 80 ECOSAN				94,436,462		
(xiii) Erosion control				26,736,974		
Subtotal	111,126,000	28,987,694	74,940,792	208,126,312	65,635,600	488,816,398
KAMONYI						
(i) protecting river banks against soil erosion by planting bamboo and reed			25,000,000			
(ii) Biogas promotion			10,100,000			
(iii) Increase the area planted by forest			17,800,000	30,000,000		
(iv) Rediucing polution by collecting solid waste			500,000			
(v) Empowering sustainable			650,000			
(vi) Promotion of grouped settlement Imudugudu				1,100,000		
(vii) protection of river banks against erosion by planting Bamboo				5,500,000		
(viii) Installation of rain water harvesting ponds					33,991,548	
(ix)Reforestation on the steep slop hills					28,000,000	

(x) River Nyabarongo river banks protected					3,900,000	
(xi) making progressive terraces					20,000,000	
(xii) Training and use of organic garbage					2,000,000	
Subtotal			54,050,000	36,600,000	87,891,548	178,541,548
KARONGI						
(i) CDF/EU/RLDSF			34,499,605	221,141,440	17,000,000	
(ii) PAREF ii /CDF		3,848,400	-	163,014,400		
(iii) National Museum					783,944,780	
(iv) DEMP/REMA				192,000,000	-	
(v) Eu/CDF andLWH				221,141,440	-	
Subtotal		3,848,400	34,499,605	797,297,280	800,944,780	1,636,590,065
KAYONZA						
(i)Erosion control by radicalterraces (1000ha)	2,000,000	2,000,000	2,000,000	2,000,000	-	
(ii)Anti -Erosion trenches (15,000ha)	950,000,000	950,000,000	950,000,000	950,000,000	-	
(iii) Forest cover (38,767ha)	9,691,750,000	9,691,750,000	9,691,750,000	9,691,750,000	-	
(iv) Colinear irrigation (1000ha)	1,000,000,000	1,000,000,000	1,000,000,000	1,000,000,000	-	
Subtotal	11,643,750,000	11,643,750,000	11,643,750,000	11,643,750,000	-	46,575,000,000
KICUKIRO						
(i) protection of Enviroment by planting trees 40 hectors	30,000,000					
(ii) Protecting river banks ,lakes and wetlands by respecting 50m from the lakes ,20m from the wetlands /marshlandsand 10m from the river		10,000,000				

(iii) installation of 55 dust bins in public places			3,500,000			
(iv) Erosion control on 2500 hectors				59,532,800		
(v) Installation of 97 Rainwater harvesting in Gahanga and Masaka sectors					75,000,000	
(vi) Putting a garden around Kigali international airport	20,000,000					
(vii) installation of rain water harvesting in public places and in the community		63,000,000	63,550,000			
(ix) preparation of 11 tree nurseries and planting of 480,000 on a surface of 16 hector				18,244,300		
(x) plant 480,000 trees on a distance of 50ha and 10km on the main roads					53,500,000	
(xi) Greening and planting tree around the roads		30,000,000				
(xii) Protection of environment by maintaining and protecting 235,000 trees planted at Rebero mountain			2,500,000			
(xiii) Construction of 18 biogas digesters and sensitizing different secondary schools to use biogas				2,209,000		
(xiv) Gardening and greening of 22 ha alongside					50,000,000	
(xv) Putting environment clubs in different schools and promoting environment cooperatives within the District		2,200,000				
(xvi) Use of energy saving stoves for 13,852 households within the District			20,000,000			
(xvii) construction of rainwater harvesting tanks and ecologic toilets in 4 secondary schools and sensitizing to all people of the District to have rainwater harvesting tanks				24,786,364		
(xviii) Construction of 70 biogas digesters			10,400,000			
Subtotal	50,000,000	105,200,000	99,950,000	104,772,464	178,500,000	538,422,464
KIREHE						
(i) Soil erosion control (400ha progressive and 12832ha radical terraces)				55,245,250	1,166,931,454	
(ii) Dykes construction to irrigate 2000ha				1,393,324,524		
(iii) Protecting river banks against erosion by planting trees						
(iv) Biogas construction across the District				40,000,000		

(v)No budget given						
Subtotal				1,488,569,774	1,166,931,454	2,655,501,228
MUHANGA						
(i) Inspection of the enviroment state		100,000				
(ii) Protection of Nyabarongo river banks against erosion			25,000,000			
(iii) Erosion control				26,736,974	52,770,001	
(iv) management of forestry resources					21,566,940	
(v)Trehabilitation of water sources		3,000,000				
(vi) production and plantation of agro forestry ,forest and fruit trees		40,525,411	26,822,643	28,755,920		
(vii)Waste Management			5,524,797			
(viii)Rehabilitation of degraded watershed and promotional of rational use of water resources					60,000,000	
(ix) inspection of mining and quarries		160,000	160,000			
(x) Management of water resources				2,945,870		
(xi)Water and energy infrastructure				29,976,078		
(xii) Access to drink				736,467	298,815,000	
(xiii) Radical terracing		1,921,588	84,977,930			
Subtotal		45,706,999	142,485,370	89,151,309	433,151,941	710,495,619
MUSANZE						
(i)Soil protection by radical terraces on 600ha in the period of 2008-2012	120,000,000	120,000,000	120,000,000	120,000,000	120,000,000	
(ii) Extension and development of agriculture practices by planting agro-forestry trees (in the period 2008-2012)	110,000,000	110,000,000	110,000,000	110,000,000	110,000,000	
(iii) Construction and mangement of 300 wells (in the period of 2008-2012	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	
(iv) Provision of solar energy and biogas (in the perid of 2008-2012)	72,000,000	72,000,000	72,000,000	72,000,000	72,000,000	
(v) Promotion of improved stoves (in the period of 2008-2012						

	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	
(vi) Protecting lake and rivers banks and eradicating water jacinth in rivers(in the period of 2008-2012	170,240,400	170,240,400	170,240,400	170,240,400	170,240,400	
Subtotal	505,840,400	505,840,400	505,840,400	505,840,400	505,840,400	2,529,202,000
NGOM A						
(i)Protection of marshlands ,river and lakes		227,000,000				
(ii) Forest Management plan			227,000,000			
(iii) Increase forest cover area				227,000,000		
(iv) Forest derivatives promotion					227,000,000	
(v) No budget						
Subtotal		227,000,000	227,000,000	227,000,000	227,000,000	908,000,000
NGORORERO						
(i) Protecting river banks	-		1,600,560	1,885,600	2,456,000	
(ii) Reforestation	-	24,327,430	26,007,460	28,885,675	34,867,693	
(iii) Biogas plant installed	-	1,200,000	1,800,000	4,800,000	102,000,005	
(iv) Radical terraces	23,471,000	14,322,612	16,216,060	36,783,139	54,306,501	
(v) Anti erosion bands	-		2,001,150	2,648,630	3,450,795	
Subtotal	23,471,000	39,850,042	47,625,230	75,003,044	197,080,994	383,030,310
NYABIHU						
(i)construction of radical terraces	149,970,634		30,924,889			
(ii) Management of forest resources		4,600,000	4,600,000	28,219,416		
(iii) Reforestation of land of state and District					2,484,894	

(iv) Intensifying progressive terraces with pasture grass (kikuyu grass), fruit trees and tea plantation in 13,650.1ha of Karago lake watershed and gishwati upscale			4,600,000		300,000	
(v) Protection of Gishwati forest				500,000		
(vi) Protection of lakeshores ,rivers and roads					66,135,280	
(vii) Protection of soil from erosion			4,600,000			
(viii) Increase land covered by trees and grass to protect ditches and progressive terraces				126,736,974		
(ix) Plantation of agro forestry trees and fruits trees					700,000	
(x) Protection of natural resources (No budget)						
(xi) Sustainable exploitation of mines and quarries					300,000	
(xii) Water and swamp protection (No budget)						
Subtotal	149,970,634	4,600,000	44,724,889	155,456,390	69,920,174	424,672,087
NYAGATARE						
(i) Seedling production			203,700,000			
(ii) Creation of 2037ha progressive terraces				19,686,480		
(iii) Creation of 65,500ha of progressive terracing					23,743,999	
(iv) Progressive terracing made 79,212ha			25,000,000			
(v) Trees planting 500,000				23,375,539		
(vi) 66.25ha of trees planted					529,257,503	
(vii) Afforestation of 1500ha			60,000,000			
(viii) Valley dam construction				174,000,000		
(ix) Construction of public toilettes					1,800,000	
(x) Biogas point installation					35,521,894	
(xi) Using solar energy						
(xii) Production of seedlings						
(xiii) Construction of water ponds						

Subtotal			288,700,000	217,062,019	590,323,396	1,096,085,415
NYAMAGABE						
(i) Developing of Anti erosion trenches 700ha and rehabilitation of the existing on 1000ha	30,000,000					
(ii) Developing Anti erosive trenches on 4547ha and rehabilitation of the existing on 6223ha			39,000,000			
(iii) Soil management through fertilization				5,000,000		
(iv) Construction of 4 selling point of charcoal					10,000,000	
(v) Radical terracing on 150ha	150,000,000					
(vi) Radical terracing on 300ha			300,000,000			
(vii) Radical terracing on 100ha				100,000,000		
(viii) Radical terraces on 200ha					41,182,380	
(ix) Preparation of tree nursery beds (10,000 forest trees, 10,000 agro forestry trees and 5000 fruit tree	32,800,000					
(x) Preparation 92 fruit tree nursery beds, 92 forest trees nursery beds and 92 agroforestry trees nursery beds			42,000,000			
(xi) Increase the area covered forest (2,770,000 trees planted & preparation of 2,300,000 trees				36,500,000		
(xii) Forest plantation (2,300,000 trees planted and 1,832,000 trees [prepared					35,422,935	
(xiii) Construction and distribution of improved cooking stoves (15000 Rondereza)	75,000,000					
(xiv) River banks protection (Rukarara: 6km, Mwogo: 19km & 5km Mbirurume)			41,805,115			
(xv) Protection of springs				270,000,000		
(xvi) Development of a Kitabi Tourism village to improve the living of the people relocated from Nyungwe					10,000,000	
(xvii) Construction of improved burning for tiles and bricks (6 Amatanura)	36,000,000					
Subtotal						1,254,710,430

	323,800,000		422,805,115	411,500,000	96,605,315	
NYAMASHEKE						
(i) Preservation of and protection of the environment			2,000,000	110,000		
(ii) Sustainable management of natural resources			14,677,276			
(iii) Sustainable forest management						
(iv) Promote access on drinking water and sanitation			25,714,155			
(v) Sustainable management of ecosystems						
Subtotal			42,391,431	110,000		42,501,431
NYANZA						
Subtotal						
NYARUGENGE						
Subtotal						
NYARUGURU						
(i) Construction of public latrines in 22 sites of District	80,000,000					
(ii) Establishing radical terraces		5,000,000	5,000,000			
(iii) Preparation of seedbeds				32,442,042		
(iv) Preparation of ditches against erosion				26,736,000	30,00,000	
(v) Planting trees on the area of 2000ha et 1000ha along roads	42,000,000					
(vi) Protecting river banks by planting bamboos and French Cameroon		4,500,000	4,500,000			
(vii) Plantation of forest and agro-forest plants				1,600,000		
(viii) Planting 1500ha forest trees and agro-forest trees					46,751,731	
(ix) Protecting 150ha of river banks by planting bamboos	150,000,000					
(x) Planting 25ha of bamboos and French Cameroon in Ruheru and Nyabimata sectors		5,000,000	5,000,000			
(xi) Construction of 14 toilets (ECOSAN) on public places				30,000,000		
(xii) Increase the number of households using rondereza					0	
xiii Construction 15,000 energy saving cooking stoves	60,000,000					

(xiv) Sensitization population and local authorities about environment conservation		2,000,000	2,000,000			
(xv) Sensitize the population against bush fire	42,000,000				0	
(xvi) Updating District forest management plan		14,725,344	14,725,344			
(xvii) Nursery preparation				150,000,000		
(xviii) Creation and exploitation 100ha of radical terraces					800,000,000	
Subtotal	374,000,000	31,225,344	31,225,344	240,778,042	846,751,731	1,523,980,461
RUBAVU						
(i) Reforestation of 150ha of mount Muhunwe located in Gishwati forest	7,850,000					
(ii) Tree production and plantation for rehabilitating Gishwati forest		14,040,014	83,127,160	102,195,093		
(ii) Tree production and plantation for rehabilitating Gishwati forest and improvement in Minagiri and Minirena					115,000,000	
(iii) Grouping fishers living in Nyamyumba sector near the Kivu lake in cooperatives and financial supporting them			3,500,000			
(iv) Protection Rubavu mountain and re-location of people from this mountain				104,000,000		
(v) Protection of river flows into lake Kivu (DEMP)					70,000,000	
(vi) Protection of shores of Kivu lake, Nyamwenda river catchment and Sebeya river shores and its tributaries (REMA and RNRA)	15,150,000					
(vii) Protection of Sebeya rivers and its tributaries		22,250,014	66,450,028		770,243,200	
(viii) Protection Sebeya river and its tributaries e.g. protecting river banks against erosion by planting				60,000,000		
(ix) Soil erosion control by implementing progressive terraces	64,000,000	21,350,682	57,350,028	47,000,000	75,958,866	
(x) Constructing of public latrines				16,950,512	11,388,360	
Subtotal	87,000,000	14,040,014	86,627,160	206,195,093	185,000,000	578,862,267
RUHANGO						
(i) Plant 1,00,000 forestry and agro-forestry tree	22,000,000					

(i) Construction of 10,000 ha of progressive terraces in 5 sector		200,000,000				
(iii) Plant 728,259 trees (forestry and agro- forestry)			20,214,850			
(iv) Plant 1,365,456 trees (forestry and agro-forestry)				46,346,850		
(v) Plant 315,000 trees (forestry and agro-forestry)					21,716,743	
(vi) Construction of 50,000 cooking stoves (rondereza)	10,000,000					
(vii) Mobilization of using canarumwe cooking stoves		22,000,000				
(viii) Monitoring and inspection different mining sites				100,000	7,200,000	
(ix) Sensitization ,monitoring and evaluation of use of renewable energies	150,000,000					
(x)Radical terraces at mwendo sector (600ha of radical terraces		8,000,000				
(xi) Construction of 100 Ecosan (toilet) in 9 sector			4,000,000			
(xii) Installatin of 5 water tanks on 5 different sector 's offices				100,000		
(xiii) Training all agronomists of sector on enviroment law					200,000	
(xiv) Plant 100 bamboos around Rwankuba and Karambi road	5,000,000					
(xv) Installation of 9 water tanks on 9 SACCO's offices	2,000,000					
Subtotal	189,000,000	230,000,000.00	24,214,850.00	46,546,850.00	29,116,743.00	518,878,443
RULINDO						
(i) Establishment and installation of 400ha of radical terraces	400,000,000	400,000,000	400,000,000	400,000,000	400,000,000	
(ii) Establish a tourism site in shyoroni	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	
(iii)Promotion of renewable energy (solar energy promotion and insatallation in schools)	28,000,000	28,000,000	28,000,000	28,000,000	28,000,000	
(iv) Protecting river banks against erosion	24,000,000	24,000,000	20,000,000	20,000,000	10,000,000	
(v) Promotion of improved cooking stoves in hiousholds	15,000,000	15,000,000	15,000,000		15,000,000	
Subtotal	667,000,000	667,000,000	663,000,000	648,000,000	653,000,000	3,298,000,000
RUSIZI						

(i) Production and plantation of 9,2898,7092 (No budget given)						
(ii) production and plantation of 6,864,726 of forestry and agro forestry					132,894,700	
(iii) Study done to prepare a waste bin at Ruganda for waste management in Rusizi town (No budget given)						
(iv) Soil erosion control at 1000ha on the surrounding hills of Bugarma marshland(No budget given)						
(v) Follow up of extraction of mine and quarries (No budget given)						
(vi) Project de protection du bassin versant de la riviere cyunyu par aménagement des des terraces progressives sur 150 ha				64,453,474	100,000,000	
(vii) Protecting Cyunyu river banks against erosion by planting trees (No budget given)						
(viii) Construction of 23 biogas plant for energy savings (No budget given)						
(ix) Construction of 23 biogas plant for energy saving (No budget given)						
Subtotal					232,894,700	232,894,700
RUTSIRO						
(i) production and plantation of 1,170,000 agro forestry, forest and fruit trees	45,000,000					
(ii) Radical terracing		2,350,212				
(iii) Management and protection of Kivu lake watershed			800,000			
(iv) Soil erosion control with bench terraces in Mushubati, Manihira and Kivumu sector				247,874,974		
(v) Production and plantation of 2,070,000 of forestry and agro forestry					629,604,944	
(vi) Production of bamboo to be used in the protection Mukura natural forest	5,000,000					
(vii) Environment conservation and protection		41,050,000				
(viii) planting trees boundary of Mukura natural forest			100,000			
(ix) To build 20 tanks for household relocated from Kinyenkanda				16,000,000		
(x) Sensitization, monitoring and evaluation of renewable energies					19,300,000	
(xi) Workshop and training in introduction of use of Biogas in District	3,000,000					

(xii) Management of forest resources		380,000				
(xiii) Production of 950,000 forest ,agroforestry and fruit trees			32,731,717			
(xiv) Management and protection of kivu lake watershed				7,000,000		
(xv) Management and protection of koko river (Musasa,Murunda ,Ruhango,Gihango)					46,635,666	
(xvi) radical terracing in Mukura sector	75,763,036					
(xvii) Management of water supply and complain of rain water harvesting		37,250,000				
(xviii) Rehabilitation and extension of of water supply in Rundoyi- Rugaragara-Gakeri -Kayove Gihinga and Rukaragata-Nyagatovu			80,000,000			
(xix) Management and protection Ndaba ,Muregaya ,koko ,Nkora and Cyimbiri rivers				27,000,000		
(xx)Bencing terraces at Mushubati and Musasa					130,968,000	
(xxi)District forest management plan trainings	2,000,000					
(xxii)Promotion of Imidugudu		5,000,000				
(xxiii)Building public latrines (Ecosan) in Mburamazi,Bugaragara,Buruseri ,Congonil,Kivum and			40,300,000			
(xxiv)Production and plantation of forestry , agro- forestry and fruit trees				58,308,854		
(xxv)Supplying and installation of 35 tanks for rain water harvesting for household relocated from Kinyenkanda				37,737,020		
Subtotal	130,763,036	86,030,212	153,931,717	393,920,848	826,508,610	1,591,154,423
RWAMAGANA						
(i)Plantation of agro forest trees and forests	28,306,274	10,309,188				
(ii) preparation of trees nurseries and plantation of forestry and agro forestry			26,654,448	28,296,317	29,711,133	
(iii)Forest management	2,567,300	2,745,450	3,228,562			
(iv) Energy saving cooking stoves and biogas use				30,000,000		
(v) Energy saving cooking stoves and Biogas use promotion					30,000,000	
(vi)water sanitation (management of water)	746,500	718,367	736,467			
(vii)Greening and beatification of Rwamagana town				10,000,000	10,500,000	

(viii) Radical and progressive terracing in Gahengeri sector	6,387,349					
(ix) Radical and progressive terracing in Musha, Gahengeri, Muhazi, Fumbwe and Munyaga sectors		734,980				
(x) Eradicating of water hyacinth in Muhazi lake on 60ha, terracing in Munyiginya sector			17,126,900			
(xi) Radical and progressive terracing in Musha, Gahengeri, Mwulire and Rubona sectors				23,356,505		
(xii) Training and sensitization on environment and environmental clubs in schools	2,250,000	3,465,000			24,524,330	
(xiii) Sensitization and training on forest and natural resource management			89,100,346			
(xiv) Rehabilitation of Muhazi lake shores (buffer Zone) and water sheds				12,356,505		
(xv) Rehabilitation of Mugesera lake shores (buffer zone)					24,524,330	
Subtotal	40,257,423	17,972,985	136,846,723	104,009,327	119,259,793	418,346,251
Districts Total for ENR and Climate change by year	18,120,467,375	16,635,769,968	18,001,704,246	21,729,071,289	16,088,058,953	90,575,071,831
Average for 28 reporting district						3,234,823,994

Annex 6: Expenditures by private firms, NGOs, CBOs and communities by districts

DISTRICT	2008	2009[mini]	2009/2010	2010/2011	2011/2012	
BUGESERA						
<i>Millennium Village Project</i>						
(i)Tree planting	9,752,000	3,713,000	92,100,000	7,290,000	6,634,000	
(ii)Water ponds	1,102,500	67,500,000				
(iii)PAREF-Tree Planting	12,948,000	12,948,000	12,948,000	12,948,000	12,948,000	
(iv)Community [Rilima,Gashore,Musenyi,etc]				16,640,000		
Subtotal by year	23,802,500	84,161,000	105,048,000	36,878,000	19,582,000	269,471,500
BURERA DISTRICT						
(i) Bamboo planting around volcanoes and ravins (imyuzi)	-	-	0	-	-	
(ii) Watershed management of BURERA lake, tree planting	-	-	0	-	-	
(iii) Tree nursery preparation, protection lake watershed and Rugezi marshland. Tree planting and radical terracing	-	-	0	-	-	
Subtotal by year						0
GAKENKE DISTRICT						
(i)Biogas construction			25,000,000			
(ii)Establishing progressive terraces			50,000,000			

(iii) Establishing Radical terraces			15,000,000			
(iv) Afforestation			9,256,789	11,236,569	13,254,469	
(v) Establishing tree nursery				6,658,241	8,325,872	
Subtotal by year	0	0	99,256,789	17,894,810	21,580,341	138,731,940
GASABO DISTRICT						
(i) Radical terracing in Rutunga and Gikomero	476,028,216					
(ii) Soil conservation, increasing tree cover,				12,092,130	3,672,000	
(iii) Increasing climate change resilience					2,400,000	
(iv) Environment awareness creation					5,000,000	
Subtotal by year	476,028,216	0	0	12,092,130	11,072,000	499,192,346
GATSIBO DISTRICT						
(i) Progressive terraces constructed over 85Ha in Rwimbogo sector, site Kiburara and Rwikiniro	85,000,000					
(ii) Progressive terraces constructed over 75 ha in Kabarore sector, site Nyarubuye	75,000,000					
(iii) Establishing a hedge of sisals in the buffer zone of Akagera National Park				17,000,000	17,000,000	
(iv) Creation of alternatives of ecosystems services						
(v) Environmental education in 5 schools and plantation of 5400 ornamental and agroforestry trees in school				540,000		
Subtotal by year	160,000,000			17,540,000	17,000,000	194,540,000
GICUMBI DISTRICT						
(i) Establishing trees nurseries	450,000	300,000	500,000	600,000	500,000	

(ii) Radical terracing	64,000,000	32,000,000	42,000,000	49,000,000	20,000,000	
(iii) Use if alternative energies (Biogas, Solar energy, Rondereza)	12,534,567	11,320,456	9,451,856	13,042,184	10,131,787	
(iv) Sorting solid wastes (in Gihembe Refugees Camp)	16,327,000	17,753,000	16,945,000	15,564,000	14,784,000	
(v) Multiplication of anti-erosive fodder	800,000	1,000,000	1,200,000	1,500,000	2,000,000	
Subtotal by year	94,111,567	62,373,456	70,096,856	79,706,184	47,415,787	353,703,850
GISAGARA DISTRICT						
(i) Planting bamboos at Akanyaru river bank			1,200,000	6,500,000	800,000	
(ii) Establishing tree nursery and tree plantation				420,000	600,000	
(iii) Making low energy cooking stoves			700,000	850,000	620,000	
Subtotal by year			1,900,000	7,770,000	2,020,000	11,690,000
HUYE DISTRICT						
(i) Marshland development and hillsides protection through progressive and radical terraces construction (789ha of progressive terraces)	-	-	0	-	-	
(ii) Establishing tree nurseries for community and beneficiaries target group			11,847,000	16,000,000	-	
(iii) Promotion of hygiene through use of ecological sanitation toilet (286ECOSAN for 19 Schools and Households)					5,207,483,303	
(iv) Promotion of energy saving technologies				22,672,800		
Subtotal by year			11,847,000	38,672,800	5,207,483,303	5,258,003,103
KAMONYI DISTRICT						
(i) Tree planting and tree nursery establishment, progressive and radical terraces			180,000,000	-	-	

(ii) Tree nursery preparation, protection of Mukunguri river banks. Tree planting	-	-	0	-	50,000,000	
(iii) Tree planting, making progressive and radical terraces	60,000,000	-	0	-	-	
(iv) Rain water harvesting by water tanks, tree nursery establishment, marking improved stoves: Rondereza	-	-	0	-	25,000,000	
(v) Progressive and radical terraces	10,000,000	-	0	-	-	
(vi) Rain water harvesting by water tanks	30,000,000	-	0	-	-	
(vii) Tree nursery preparation, wells making	600,000,000	-	0	-	-	
(viii) Making organic fertilizer	20,000,000	-	0	-	-	
(ix) Rain water harvesting by water tanks, hygiene promotion (construction of ecosan, distribution of hygiene materials)	800,000,000	-	0	-	-	
(x) Biogas promotion	-	-	0	-	30,000,000	
(xi) Protection of Mukunguri river banks	500,000,000	-	0	-	-	
(xii) Bamboo nursery preparation	700,000	600,000	200,000,000	150,000,000	120,000,000	
Subtotal by year	2,020,700,000	600,000	380,000,000	150,000,000	225,000,000	2,776,300,000
KARONGI DISTRICT						
(i) Establishing tree nursery and tree planting	-	-	200,000	360,000	2,695,595	
(ii) Introduction of use of BIOGAS the District and improved cooking stoves	-	-	10,000,000	15,000,000	11,520,000	
(iii) Soil erosion control by progressive terraces during community work	-	-	0	480,000,000	520,000,000	
(iv) Hygiene	-	-	0	1,000,000	1,200,000	
(v) Establishing tree nurseries	-	-	200,000	400,000	500,000	

Subtotal by year			10,400,000	496,760,000	535,915,595	1,043,075,595
KAYONZA DISTRICT						
Subtotal by year						0
KICUKIRO DISTRICT						
(i) Construction of Aquasan Toilets and get manure from the feaces				1,000,000		
(ii) Waste collection in Kanombe and Nyarugunga Sector					39,000,000	
(iii) Waste collection in Kagarama and Niboye Sector					36,000,000	
(iv) Waste collection in Kicukiro and Gatenga Sector					78,000,000	
(v) Provision of rainwater harvesting tanks to some households in Kanombe sector					37,000,000	
Subtotal by year				1,000,000	190,000,000	191,000,000
KIREHE DISTRICT						
(i) Establishing tree planting and a forestation		400,000		200,000		
(ii) Security guards		1,000,000		800,000		
(iii) Honeybee production		900,000	600,000	700,000		
(iv) Water hyacinth eradication				3,500,000	500,000	
Subtotal by year		2,300,000	600,000	5,200,000	500,000	8,600,000
MUHANGA DISTRICT						
(i) Plantation of forestry and agroforestry practices	6,000,000	5,000,000	6,500,000	5,500,000	6,000,000	
(ii) Radical terraces	15,000,000	18,000,000	20,000,000	21,000,000	22,000,000	

(iii) Establishing tree nursery	1,000,000	1,100,000	1,200,000	1,000,000	1,050,000	
(iv) Progressive terraces	2,500,000	3,000,000	0	-	3,500,000	
Subtotal by year	24,500,000	27,100,000	27,700,000	27,500,000	32,550,000	139,350,000
MUSANZE DISTRICT						
(i) Protection of volcanoes National Park and protection of ravines (rivers) from VNP	-	-	0	-	-	
(ii) Protection and conservation of VNP by capacity building of People surrounding VNP	-	-	0	-	-	
(iii) Soil erosion control (progressive terraces and planting agro forestry trees)	-	-	0	-	-	
(iv) Soil concervation and forest management	-	-	0	-	-	
(v) Protection and conservation of VNP	-	-	0	-	-	
Subtotal by year						0
NGOMA DISTRICT						
Subtotal by year						0
NGORORERO DISTRICT						
(i) Establishing tree nurseries		215,700	340,000	356,050	302,587	
(ii) Protection of river banks		560,145	785,975	-	588,632	
(iii) Promoting energy saving cooking stoves				1,485,795	1,993,856	
(iv) Waste management and sanitation				1,545,058	2,198,787	
Subtotal by year		775,845	1,125,975	3,386,903	5,083,862	10,372,585
NYABIHU DISTRICT						

(i) Establishing tree nursery (2010), Tree plantation construction of radical terraces and progressive terraces and construction of ditches	800,000	300,000	450,000	520,000	1,750,000	
(ii) Establishing tree nursery and tree plantation (agro forestry trees and fruits trees)	500,000	1,500,000	2,000,000	1,875,000	-	
(iii) Tree nursery and tree plantation in KARAGO watershed	2,000,000	600,000	2,000,000	5,600,000	6,400,000	
Subtotal by year	3,300,000	2,400,000	4,450,000	7,995,000	8,150,000	26,295,000
NYAGATARE DISTRICT						
(i) Establishment and management of Agroforestry free nurseries		500,000	600,000	400,000		
(ii) Rain water harvesting and storage (in response to climate change)	-	5,868,340	0	-	960,000	
((iii) River bank protection	-	-	0	-	650,000	
(iv) Trees planting	-	-	0	-	-	
(v) Protection of hillside against soil erosion by tree planting	24,000,000	20,000,000	20,000,000	20,000,000	20,000,000	
Subtotal by year	24,000,000	26,368,340	20,600,000	20,400,000	21,610,000	112,978,340
NYAMAGABE DISTRICT						
(i) Establishing trees nursery beds and tree plantation[PAGOR]	75,000,000		32,000,000	5,000,000	10,000,000	
(ii) Clean technologies (improved burning for tiles and bricks and Rondereza[PAB]	36,000,000					
Subtotal by year	111,000,000		32,000,000	5,000,000	10,000,000	158,000,000
NYAMASHEKE DISTRICT						
Subtotal by year						0
NYARUGURU DISTRICT						

(i) Tree planting						
(ii) Tree planting						
Subtotal by year						0
RUBAVU DISTRICT						
(i) Training on environmental law and regulation	-	-	0	-	-	
(ii) Waste collection and transport from Gisenyi town to Rutagara landfill	2,000,000	-	0	-	-	
Subtotal by year	2,000,000					2,000,000
RUHANGO DISTRICT						
(i) Establishing trees nursery	-	15,000,000	12,000,000	10,000,000	25,000,000	
(ii) Plantation of forestry and agroforestry practices	-	80,000,000	70,000,000	110,000,000	100,000,000	
(iii) Biogaz and rondereza promotion	-	3,550,000	2,600,000	2,000,000	4,000,000	
(iv) Increasing CANARUMWE cooking stoves	-	-	0	6,800,000	5,700,000	
Subtotal by year		98,550,000	84,600,000	128,800,000	134,700,000	446,650,000
RULINDO DISTRICT						
Subtotal by year						0
RUSIZI DISTRICT						
(i) Establishing trees nurseries						
(ii) Plantation of forestry and agroforestry practices						
(iii) Biogaz promotion						

Subtotal by year						0
RUTSIRO DISTRICT						
(i) Establishing trees nurseries	-	100,000,000	150,000,000	100,000,000	120,000,000	
(ii) Plantation of forestry and agroforestry practices	40,000,000	70,000,000	90,000,000	190,000,000	150,000,000	
(iii) Biogaz promotion	2,250,000	2,250,000	3,200,000	800,000	4,000,000	
(iv) Production of biodegradable products	9,360,270	7,426,400	5,711,270	6,494,060	7,021,430	
(v) Gishwati Forest conservation	102,340	104,340	108,520	212,040	41,444	
Subtotal by year	51,712,610	179,780,740	249,019,790	297,506,100	281,062,874	1,059,082,114
RWAMAGANA DISTRICT						
(i) Establishing trees nurseries	5,500,000	680,000	560,800	875,600	1,670,000	
(ii) Plantation of forestry and agroforestry practices	1,780,000	1,800,000	2,000,000	3,000,000	4,000,000	
(iii) Biogaz promotion	-	-	4,900,000	5,300,000	6,600,000	
(iv) Lake shores rehabilitatin and buffer zone protection	-	-	0	-	-	
(v) Water and sanitation	150,000	180,000	200,000	220,000	23,000	
Subtotal by year	7,430,000	2,660,000	7,660,800	9,395,600	12,293,000	39,439,400
total by year	2,998,584,893	487,069,381	1,106,305,210	1,363,497,527	6,783,018,762	12,738,475,773
average for 20 reporting districts						636,923,789

Annex 7: List of active private firms/NGO, CBO in environment, natural resources and climate change by district, 2008-2012

District Interventions	Tree planting	Watershed	Radical Terracing	Biogas construction	Soil conservation	Sustainable Energy	Climate Change Awareness Creation	Low energy cooking stoves.	Rain Water Harvesting	Ecosystems services	Hygiene and Sanitation	Waste Management	Honeybee production	Pollution Management
BUGESERA														
Millennium village project	√	√												
PAREF	√													
Community	√													
BURERA														
ARECO RWANDA NZIZA	√													
IFDC	√	√												
HELPAGE	√	√	√											
GAKENKE														
World vision			√											
PAIGELAC			√											
COATA GASEKE			√											
CTB			√											
GASABO														
European Union			√											
VI-LIFE	√				√	√	√							
Prime Health Development							√							
GATSIBO														
ADRA			√											
RECOR	√													
GICUMBI														
RENGERUBUTAKA	√											√		
APAPE			√											
VI-LIFE				√										

ARC														
GISAGARA														
Gasabo youth cooperative	✓													
Save cooperative for Environment.	✓													
Tububungabunge							✓							
HUYE														
Agro Action Allemand			✓											
APROJUMAP	✓													
PEPAPS/CTB										✓				
CASE/CARE							✓							
KAMONYI														
SYNDICAT	✓													
INGABO	✓													
DUHAMIC-ADRI	✓		✓											
TEARFUND/RDIS	✓							✓						
ACORD			✓											
PDK	✓							✓						
MEDICUS MUNDI								✓		✓				
KARONGI														
Duterimbere Rubyiruko	✓													
World Vision				✓			✓							
Local community			✓											
Treminalia company	✓													
Ba heza Munyarwanda										✓				
KICUKIRO														
Rwanda Environmental Care								✓	✓					
AGRUNI												✓		
REP												✓		
UBUMWE												✓		
KIREHE														
UBURUMBUKE	✓												✓	✓
MUHANGA														
UGAMA	✓		✓											

COPEHOPE	✓													
DUHAMIC			✓											
ADRI			✓											
MUSANZE														
ARECO			✓											
IGCP			✓											
HELPAGE			✓											
NGORORERO														
Dukomezimihigo cooperative	✓													✓
Abakorandumurava cooperative								✓						
Cooperative protection														✓
NYABIHU														
TURWANYEISURI CLED COOPERATIVE	✓		✓											
Tera igiti cooperative	✓													
COATKA	✓	✓												
NYAGATARE														
RHEPI									✓					
RSSP	✓		✓											
NYAMAGABE														
PAGOR	✓					✓								
PAB						✓								
NYARUGURU														
APRECO	✓													
DUHAMIC-ADRI	✓													
RUBAVU														
BAIR	✓													
AKPE														✓
RUHANGO														
PAFOR	✓				✓									
REPCAW LTD									✓					
RULINDO														
DUSHYIGIKIRANE	✓													
IFDC	✓													

AGROFORESTRY	✓													
DUHAMIC-ADRI	✓													
RUSIZI														
HELPAJE	✓													
PAREF 11	✓													
RUTSIRO⁴⁸														
EFECO	✓			✓										
RCBP				✓										
KOABIMU				✓										
GREAT APE TRUST	✓													
RWAMAGANA														
ABAHUJE MUHAZI	✓													
BIOMIC				✓										
INKERAGUTABARA MUSHI														✓
UBUZIMABWIZA													✓	

⁴⁸ Where V = intervention categories