ANALYSIS OF THE DECENTRALIZATION OF ENVIRONMENTAL MANAGEMENT IN RWANDA

By

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DEDICATION

To my Wife and My Son, who always believed in me.

DECLARATION

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ABSTRACT

The aim of this case study is to draw a picture about the present situation and highlight constraints and challenges to the implementation of National Environment Policy (NEP) in Rwanda by identifying limits and prospects for improving the ongoing implementation process. we found that environmental management at the local level is subject to the compounded effects of the obstacles faced by the local administration, the complex nature of environmental management, and the lack of assimilation of environmental issues at the national level. Environmental conditions suffer as a result, and there is a need for substantial modifications to improve the situation. Improved functions should lead to the enhancement of the local environment through: Higher investments from the regulated community subjected to more targeted enforcement, Private investments in infrastructure through the privatization of functions traditionally borne by the District, Pollution prevention through forward-looking planning, Greater efficiency in using available resources and justified requests to the central budget

CHAPTER 1: INTRODUCTION

Environment management is a cross-cutting field and must be integrated in economic growth and social development with which it constitutes the three pillars of sustainable development "Thinking globally, acting locally" was the slogan of the 1992 Earth Summit and captures the global trend of decentralizing environmental management that has been apparent since the 1990s (Osterveer, 2010). According to many environmentalists, local communities "are better able to understand and intervene in environmental problems because they are 'closer' to both the problem and the solution" (Lane, 2005). Therefore, decentralized environmental management is key for successful environment protection because it enables communities to get actively involved in environmental management and suit actions to the local needs. Critiques claim however that this assumes an idealistic concept of communities, central and local actors as well as their cooperation which is seldom the case (Larson, 2008).

1.1 Environment and Climate Change Analysis for Rwanda

Rwanda is the most densely populated country in Africa and 57 % of the population live under the national poverty line. Rwanda is landlocked and is weakly integrated in the global economy. Population pressure coupled with inadequate management of forests and lands constrain economic growth and slow poverty reduction efforts by lowering agricultural yields and raising energy prices. Areas within the Lake Victoria Basin such as Bugesera and Crete of the Nile have the highest levels of food insecurity in Rwanda (MINECOFIN, 2006).

The ability of ecosystems to provide food, clean water, wood fuel and biodiversity is particularly threatened in Kibungo (Wong, 2005). In recent years there is evidence of increased activities to respond to deforestation and soil erosion (GoR, 2007).

Key environmental and natural resources problems

Deforestation, soil erosion, degradation of river banks and lakeshores, overgrazing, wildlife poaching and desertification are the key environmental problems facing Rwanda. The most acute problems are soil erosion and wetland degradation (Centre for Resource Analysis, 2006).

Nutrients and eroded soil reach Lake Victoria primarily through River Kagera that account for 1/3 of the river inflow in the lake and is a major contributor of water hyacinth infestation (Centre for Resource Analysis, 2006). Rapidly growing urban areas are also creating problems of waste management, air and water pollution. Another downstream effect is reduced potential for Rwandan hydropower generation due to siltation (reduced water storage) and lower water levels.

Key causes

Land scarcity, population pressure, poverty and lack of alternative livelihood options are main causes for unsustainable use of natural resources. Fallow periods have been drastically reduced and marginal lands, steep hills and wetlands have been encroached in search for agricultural lands and fuel wood (GoR, 2006). Internal displacement of 30% of the population following the genocide in 1994 and to some extent elite capture has severely aggravated the situation particularly in the Lake Victoria part of the country and in the Northwest (Gishwati forest) (Partners, 2006) . Furthermore, Rwanda has inadequate human and institutional capacity to design and enforce policies for land tenure and sustainable management of natural resources (TDA 2006) and suffers from reform fatigue (Sida, 2005) . Last but not least capacity to disseminate appropriate technologies to the rural poor is weak.

Opportunities

Improved management of natural resources are seen in EDPRS as a means to increase agricultural yields (soil and water conservation), improve food security and export revenues. Efforts to reduce water and air pollution can also improve employability and reduce health expenditures. Eco tourism is highlighted as an opportunity to increase foreign investments and expansion of the services sector. Increased global focus on climate change mitigation provides opportunities for carbon projects (clean development mechanism or voluntary schemes). Rwanda is planning to expand the capacity to attract such funding. Nevertheless it should be noted that there are few forest sector CDM projects globally and that there are a number of constraints that limit expansion. Rwanda's capacity to absorb funds will in part depend on overall stability and quality of institutions. It is also important that potential projects consider poverty and livelihood impacts.

Effects of the environmental risks and opportunities

Economic growth, environment and natural resources

For instance, in Rwanda, the majority of population depend on agriculture, in 2002, the population engaged in agriculture was 87 % and the sector provided employment to 88 % of the population. Agriculture contributes 47 % to GDP and accounts for 71 % of the country's export revenues and is the main source of income for 87% of the population (GoR, 2006). Fisheries account for less than 1% of GDP and forests to about 1% (GoR, 2003). More than a quarter of the population cultivate less than 0,2 hectares and only 40 % cultivate 0,7 hectares or more, which is an estimate of the minimum area needed to feed a typical Rwandese family. "Small or insufficient plots of land" and "Poor soils" are the two leading causes for poverty according to the National Poverty Assessment. Cultivated land increased by 7% between 2000-2003 and the livestock holdings have increased by 60% between 2000-2005 (GoR, 2006). There is also potential for extended wildlife tourism. Currently tourism account for 5,8 % of GDP (World Travel and Tourism Council) (1).

Rwanda lacks significant mineral or oil deposits, export revenues are small and foreign savings finance most of the country's investments. The national target is for agriculture to grow by 5-8 % per year while at the same time reduce the number of people involved in agriculture from 91 to 50 %. Alternative livelihoods and private sector development (manufacturing, ICT, tourism) are to be generated in part through investments in transport network and improved energy supply.

There are few estimates of the costs of climate change for Rwanda. More extreme weather could be expected to lower agricultural production due to increased erosion, insufficient water availability and livelihoods lost in natural disasters. Ultimately, the costs of climate change to Rwanda will heavily depend on the success of global mitigation and the country's adaptive capacity. According to the Stern review a temperature rise of 5-6 % would result in costs of 510% of global GDP and for poor countries costs in excess of 10%. If mitigation efforts can reduce global warming to 2 degrees at 2050 costs would be substantially lower.

Diminishing natural capital

According to a World Bank estimate Rwanda's natural assets are reduced/degraded by close to 3 % of Gross National Income per year, mainly due to deforestation. It is a low estimate as it does

not consider land or water degradation. Costs of soil erosion alone have in another study been estimated to 1,9 % of GDP (GoR, 2006) .

 Over cultivation and soil erosion lead to reduced yields per hectare (Lewis, 2000) and threatens food security and livelihoods. Soil erosion is moderate to severe on 50% of the land surface. Land productivity on much eroded farms is 21% lower on farms with little erosion. Deforestation and conversion of wetlands such as Rugezi-Burera-Ruhondo has significantly contributed to lower water flows in rivers and reduced capacity of the Ntaruka and Mukungwa hydropower stations. As a consequence of the power shortage, the electricity bill more than doubled (GoR, 2006). Diesel powered generators were brought in to compensate for reduced hydro power generation. By the second quarter of 2006 the cost of paying for the diesel was estimated to approximately US$ 65,000 per day (EIU 2006) (Economic Intelligence Unit, 2006).

Apart from reduced capacity for wetlands to provide ecosystem services like water regulation the poor have suffered from reduced availability of fish, fodder and medicine, reduced flood protection and increased time for transportation. (GoR, 2006)

Population, poverty, health and conflict

Rwanda's population is estimated at 9,9 million with an annual growth of 2,8%. About 57 % of the population are living below the national poverty line with large regional disparities. The highest poverty rates are found in the Lake Victoria basin (Butare and Gikongoro in the Southern Province). In Kigali, the poverty rate is about 12,3 % and like other urban areas the city is rapidly growing. Coverage rates for safe water supply have increased between 2002 and 2005 from 41% to 55% in rural areas and from 66% to 69% in urban areas (Partners, 2006).

 Unsustainable use of natural resources and pollution tend to affect women more than men. Over 94 % of Rwandans depend on wood fuel for domestic energy. Women often spend longer hours to collect fire wood and water as resources decline and are more exposed to indoor air pollution (respiratory diseases). In Rwanda about 20 000 deaths annually are attributed to poor water quality and hygiene (60%), indoor air pollution (39%) and outdoor air pollution (1%) (WHO, 2002). Poor health due to polluted water and air reduce employability and participation in education, especially for the poor.

Land disputes are very frequent, many involving resettlement of refugee-returnees, and could threaten reconciliation and stability. Abundant natural resources in neighbouring countries, particularly Democratic Republic of Congo (minerals, forests) has provided a motivation and the means for perpetuating conflict in the Great Lakes. An institutionalized system for controlling natural resources wealth has involved strong interests from DRC, Uganda and Rwanda (UNECA, 2007).

What are key actors doing to manage the Environmental risks and opportunities and to what extent are responses implemented?

National development plans and institutional capacity

Integration of environment and natural resources management is significantly improved in the new EDPRS (Centre for Resource Analysis, 2006). Environment has been identified both as a sector and as a cross cutting issue and proposed indicators include: areas protected against soil erosion, access to water and electricity, forest cover and implementation of land tenure system. Furthermore, the EDPRS mention the need to address findings of the National Adaptation Plan of Action on Climate change, supports use of Environmental Impact Assessments (for development projects, infrastructure etc) and Strategic Environmental Assessments (for policies, plans and programmes).

While it is being too early to judge if measures proposed in the EDPRS will receive necessary funding and capacity for implementation, there are also some encouraging actions that translate government commitment to improved management of natural resources.

-Between 2000 and 2005 the forested area has increased by 8% annually (FAO, 2005).

-Improved budget execution for environment between 2003-2005. This is partly due to an improved mandate (establishment of REMA, Rwandan Environmental Management Authority) and better planning (FAO, 2005).

REMA has been accused by the private sector and parts of government of hindering investments by being too demanding and/or for having weak bureaucratic capacity (Times, 2007). This could be interpreted both as a sign of strength, that environmental regulations are implemented, but also as a weakness if the capacity is insufficient.

Dissemination and enforcement of the recent land policy (that strengthens women's rights to land), environmental awareness raising and mainstreaming of environment in other sectors are considered top priorities (Partners, 2006). However, institutional capacity to design and implement policies and enforce laws is weak.

A decentralization reform in 2006 has given more power to local authorities. District level development plans include environmental protection actions such as planting trees and putting in place anti-erosion measures (Minaloc, 2008). Lack of skills and financial capacity on local level however remains a problem. The performance contracts signed by District Mayors with the President of the Republic include environmental protection programmes especially soil protection through building terraces and reforestation.

Thus, a successful implementation of the National Environment Policy (NEP) and participation of all Rwandan at different level is therefore essential to ensure a prosperous future of Rwanda. However, the environmental management in Rwanda has so far not gotten the attention required.

The aim of this case study is to draw a picture about the present situation and highlight constraints and challenges to the implementation of NEP in Rwanda by identifying limits and prospects for improving the ongoing implementation process in order to ensure sustainable development. This study is of great contribution to effective decentralization of environmental management in Rwanda.

1.2. Objectives

The main objective this study is to assess the implementation of the NEP in Rwanda and to address constraints to the process as well as offer suggestions as to how to strengthen the decentralized implementation process. A combination of process evaluation and an analysis of the conditions and preconditions were done. Implementation studies in general have a strong regional bias with only 4% of implementation studies set in Africa (Saetren, 2005). This is in contrast to 69% in the US and Canada (Saetren, 2005). In this respect, this research will serve as a contribution to the small percentage of implementation research carried out in Africa so far.

1.3. Research questions

This study aimed at determining the degree of implementatibility of the National Policy on Environment (NPE) at the background of a decentralization process.

Specifically, the study aimed to answer the following research questions:

1. How suitable is the institutional framework for the implementing agencies and organizations?
2. How much flexibility does the local government level have in implementing the policy?
3. How well established is the cooperation and interdependence between the central government, local agents and civil society?
4. How well established is community-participation, knowledge and support for the implementation?

1.5 Organization of the thesis

This Thesis is divided into 5 Chapters where the first one is a short introduction and overview of the thesis. In chapter two the theoretical framework is explained and an overview of its operationalization given. Chapter three deals with the Research methodology and the experience in the field. Chapter four explain the findings and general discussion and Chapter five offers a conclusion and Implications for practice.

CHAPTER 2: LITERATURE REVIEW

2.1 Environment management key concept

Awareness of environmental issues in Rwanda goes back to the colonial period when actions aimed at the protection and conservation of environment was undertaken at different periods. Between 19920 and 1950, initiatives of environment conservations started with reforestation(1920); creation if albert park (1935); natural fores t protection such of Nyungwe and Akagera in 1933 and 1935 respectively; soil conservation campaign by former of *Institut des Sciences Agronomiques du Rwanda (ISAR)* (1937), and establishment of soil conservation colonial law in 1947 (GoR, National Environment Policy, 2005).

After independence, action programs of an environmental nature were launched under annual themes such as: human settlement (1977; stockbreeding (1978; soil protection and conservation (1980); water supply in rural areas (1981); erosion control (1982); reforestation and creation of hygiene and Environment division (1983; and the national environment seminar of 1985 which resulted into national environment strategy (1991) (GoR, National Environment Policy, 2005).

The aims of this strategy were as follows: (a). to enable the country to strike a dynamic balance between population and resources while complying with the balance of ecosystems; (b). to contribute to sustainable and harmonious socio-economic development such that, both in rural and urban areas, men and women may realize their development and well-being in a sound and enjoyable environment; (c). to protect, conserve and develop natural environment, these activities being the concerns of each and every one (GoR, National Environment Policy, 2005).

In 1989 was created the "Environment and Development Project" in the Ministry of Planning, which later became the National Environment Unit, a springboard for the establishment of the Ministry of Environment and Tourism (MINETO) in 1992, the duties of which included, among others, the coordination of all environment related activities carried out by different ministries.

It should also be pointed out that during the same year, Rwanda took part in the Rio de Janeiro World Earth Summit and institutionalized the National Environment Week, which was in addition to other initiatives such as the establishment of the Office National de la Population (1981), the

Tree Day (1980), the Water Day (22nd March), the Meteorology Day (23rd March), the Biodiversity Day (22nd May), etc. 1992 was marked by the drafting of the Law on Environment.

The 1994 genocide and massacres brought to a standstill the initiatives that had been launched, and they were revived by the Government of National Union. It is in this context that should be viewed the ratification of International Conventions such as: (a) Convention on Biological Diversity (1995) ;(b). United Nations Outline Convention on Climatic Changes (1998) ;(c). United Nations Convention on Desertification (1998) ;(d). Vienna Convention for the Protection of the Ozone Layer (2001) ;(e). Stockholm Convention on Persistent Organic Polluting Agents (2002). (f). Ramsar Convention on Wetlands (2003); (g). Convention on the Conservation of Migratory Species of Wild Animals (2003); (h). Convention on the Prior Informed Procedure for certain hazardous chemicals and pesticides in international trade (2003). Basel Convention on control of transboundary movements of hazardous wastes and their disposal; and (j). Kyoto Protocol to the United Nations Convention on Climate Change.

In 1996, National Agenda 21 and the National Environment Strategy and Action Plan were updated. Following the Government reshuffles of 28th March 1997 and 8thFebruary 1999, Environment was successively placed under the Ministry of Agriculture, Animal Breeding, Environment and Rural Development and the current Ministry of Lands, Resettlement and Environment, the principal mission of which was to formulate the policy and the law relating to the protection of Environment.

Moreover, in 2001, the Ministry was strengthened by the establishment of a Ministry of State responsible for the Protection of Environment, which was operational from August 2001 till 15th November 2002. The Rwanda Environment Management Authority (REMA) is now in place.as the organ responsible for the execution of environment-related policies and laws (GoR, 2005).

2.2.   Concepts

2.2.1. Policy 1mplementation

A public policy is: "a set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and the means of achieving them within a specified situation where those decisions should, in principle, be within the power of those actors" (Hewlett and Ramesh, 2003). The involvement of various actors and their interrelation in the implementation of

the NPE was the ground on which this definition was picked. According to Sabatier (2002) "Implementation is the carrying out of a basic policy decision, usually incorporated in a statute but which can also take the form of important executive orders to court decisions." Though simple in theory, carrying out a policy decision can be a challenging process and it is not a phenomenon where there is one right way to go about doing and/or studying it.

Street-level bureaucrats are "public service workers who interact directly with citizens in the course of their jobs, and who have substantial discretion in the execution of their work" (Meyers and Vorsanger, 2007).

2.2. Existing theoretical approaches of policy implementation

Though over time different theoretical approaches have been popular to different degrees, one theory never fully replaced the other. Most of them coexist alongside each other and do not necessarily exclude one another. It is important to note that implementation has different meanings and different challenges are met depending on the policy to be implemented as well as the cultural context of implementing agencies and countries.

2.2.1. The five stage model

As Sabatier's definition of implementation implies, a formulation of a policy or plan has to have happened before implementation can happen. The policy process is therefore divided into a set of stages, referred to as the "policy cycle" (Howlett and Ramesh, 2003).This model identifies 5 main stages:

1. Agenda setting (how do problems come to attention?)
2. Policy Formulation (what proposed solutions are there and how are they formulated?)
3. Decision-making (how is the choice of solution being made?)
4. Policy Implementation (How are the solutions being put into effect?)
5. Policy Evaluation (the monitoring of the results)

This study aimed at assessing the policy implementing stage. Until the 1970s, implementation was perceived as relatively unproblematic and hence rarely studied. However in the 1970's, Pressman and Wildavsky (1973) as well as other researchers conducted studies and recognized that many of the programs under the Johnson administration in the US were not implemented the way they

were intended to. The realization of this problem soon gave rise to a dispute over the analytical focus of policy implementation

2.2.2 Decentralized policy implementation

Some studies claim that implementation should be studied from the top down, concentrating on the top officials and their role in the process as well as the institutional design. This approach assumes that the implementation process's crucial elements determine decisions emerging from the top. In contrast other researchers focus on a bottom-up approach, claiming it is the actions of the people that carry out the implementation and the ones that are affected by it that influence the success or failure of a program (Howlett and Ramesh, 2003). However, as mentioned above, these two approaches are not contradictory but rather complimentary. Taken together, top-down and bottom-up approaches give better understanding into the policy implementation that any one of them would do by themselves (ibd). Implementing policies in a decentralized manner requires looking beyond the boundaries of the classical top down and bottom up approaches. An important aspect of decentralized policy implementation is on the one side "the need of national governments to extend their power into local areas" and on the other hand the question of "how agents react to local preferences for flexible enforcement" (Whitford, 2007).

2.2.3. Søren Winter's integrated implementation model

The Implementation process is characterized by three clusters of variables: Organizational and Inter organizational implementation behavior, street-level bureaucratic behavior and target group behavior. Though other researchers such as Pressman and Wildavsky (1973) have argued that the more actors the more likely a problematic implementation, Winter and O'Toole point out that in the case of a well-organized early understanding, the opposite can happen. Street-level bureaucrats play an important role in most implementations due to their direct contact with the citizens as well as the discretion they employ influence the implementation process greatly. The third variable in winter's framework is target group behavior. Target groups are, according to winter , citizens or firms and they affect the action of street-level bureaucrats. Another important influential factor for successful policy implementation according to winter is the socio-economic context and policy design.

2.3 POLICY DESIGN

Policy design plays a crucial role in the policy process. The fundamental elements of a policy design reflect social and political values of the time and space, historical influences, local knowledge as well as current ideas about what constitutes a "good" policy (Schneider and Sidney,2009). Elements of policy design have an immediate impact on the implementation of a policy and hence need to be considered closely when assessing implementability of the NPE. Environmental management in Rwanda has previously been determined by a large number of different international treaties as well as various local acts. This, for example has an immediate impact on the design of the NPE as well as its implementation. The inclusion of policy design as a variable allows for a better understanding of the NPE itself as well as the implementation environment (Schneider, 2006).

Schneider and Ingram (Schneider and Sidney, 2009) have outlined nine main elements of a public policy design: (a)the problem and goals of the policy ;(b) profits and burdens and their distribution pattern; (c)target groups ;(d)Rules and Regulations (a clear definition of who is to do what); (e)tools; (f)Structure of Implementation; (g) Social constructs that the policy is embedded in ;(h) Rational behind the policy; and (i) fundamental believes. These elements reflect the setting and circumstances of the policy. Several researchers have acknowledged that "policies create politics" (Lour, 1964). Before the ratification of the NPE, environmental politics in Rwanda were not considered an important issue for the various ministries. The NPE, in creating responsible institutions has fundamentally altered environmental politics in Rwanda.

2.3.1 Organizational and Inter-Organizational Implementation Behavior

In the last decades policy implementation research has gone from a general attitude of "can-do" (Hanf and O'Tool , 2006) to an emphasis on the need of addressing policy difficulties. Implementation has become increasingly more complex and the issue of governability is at the center of most policy debates today. Government is charged with addressing certain policy issues but is unable to deal with the issues in a satisfactory manner. Today's policy issues need an increased interlinkage between different specialties. Especially in social sciences, there are very few problems that can be addressed by only one organization. Instead interorganizational relations are the heart of "implementation networks" (Hull and Hjren 1983). Different actors have different perspectives, interests and can influence different sectors, which is important for a successful

policy implementation. However, different actors also have different amounts of information available, different interests and prefer different course of action. According to O'Tool (1984), it is the nature of bureaucratic organizations to have an unwillingness and inability to respond to certain mandates. This problem is compounded if many organizations or agencies are involved in the implementation of these mandates. However, this does not mean that inter-organizational implementation is doomed. The success depends on the type of interdependence that is present. "The probability of implementation increases with the number of units when the type of interdependence requires little coordination at the initial, or formative stage" (O'Tool 1984).

For successful implementation it is important that organizations do not only do so but act in a coordinated way. However, as mentioned, every organization has its own goals, values and interests. It can therefore be problematic to have several organizations work together. Hence, it is important that the new mandates align with the overall direction and goals of the individual organizations. There are several factors that influence the type of interdependence and cooperation, one of which is the type of incentives. O'Tool names three main inducements:

1)   Authority (a sense of duty can drive inter-organizational cooperation)

2)   Common interest (everyone involved values the end-goal)

3)   Exchange (the promise to get something in return can drive interdependence)

Another factor is the provision of new resources. In many cases, mandates are however given without any additional resources. These programs are referred to as "tack-on" programs (O'Tool 1984). According to O'Tool, withholding of resources will produce "no action or uncoordinated action, depending upon the structure of interdependence" (O'Tool, 1984). The structure of interdependence is therefore an important influential factor. Thompson differentiates between three types (Thompson, 1967 in: O'Tool 1984):

- Pooled interdependence (each agency provides their own contributions but do not deal with each other directly)
- Sequential interdependence (the problem with a sequential interdependence is that if a delay occurs at any point, it delays and influences everyone else in the chain)
- Reciprocal interdependence (In the case of reciprocal interdependence, the organizations have to adjust mutually to coordinate with each other. This brings a great deal of

uncertainty for all participants but bears the possibility of a great advantage since it forces great inter-organizational adoption to the policy).

Due to the nature of a decentralized environmental policy, the NPE requires reciprocal interdependence. Research showed that "implementatibility" can be improved by establishing a new agency, give it a specific mandate and provide necessary resources. A recipe that was more feasible before the NPM movement. However, this also created an "implementation dilemma" (O'Tool 1984). A new agency requires more people that will work in a certain area and thus increase cost of coordination not only for current but also for future inter-organizational implementation. (Hanf & O'Tool, 2006) Argue that for analysis purpose, it is important to look at the different organizations as a whole unit of analysis. The steering, also referred to in literature as "reticules functions" (Friend et.al, 1974) or "facilitation (O'Tool 1983), has to be strong to ensure successful implementation. If authority is absent or weak, cooperation will be limited. People in charge of steering the policy also control the flow of information, a powerful and important tool in making sure everyone knows who does what and in establishing trust between different actors.

2.3.2 Street-Level Bureaucratic Behavior

Street level bureaucrats are in a unique and influential position since they are the linkage of organizations and citizens. They get input from both sides and have a certain span of discretion that they can exercise in implementing policy regulations. Allocating resources as well as interpreting rules and hence influencing the shape policy implementation takes are among their attributes. Their role in shaping the policy delivery is often overlooked. This is attributed to the difficulty of studying street-level bureaucrats. Factors that influence street-level bureaucratic behavior include:

(a)The question of Control

Studies have shown that street-level bureaucrats are imbedded in different systems such as socioeconomic systems, professional systems, organizational systems, to name but a few. This raises the question who exercises control over street-level bureaucrats. Some studies concentrate on political control but most of them indicate only indirect or limited evidence of political control over street-level bureaucrats (Meyers and Vorsanger, 2007). Other researchers have focused only on organizational control of street-level discretion (Meyers and Dillon ,1990 ; Mayers & Vorsanger 2007).

(b)The extent to which street-level bureaucrats exercise discretion

This is depending on the organizational environment of the policy. The more complex the environment, the more discretionary judgments are made by street-level bureaucrats. Monitoring these becomes more challenging as well. One of the key contributors to the extent of discretionary decisions are resources. If resources are scarce, studies have shown that street-level bureaucrats ration services and rationalize program objectives (Winter, 2001). Brehm and Gates (1997) argued that it is neither political nor organizational control that has the most influence on street-level bureaucrats but rather individual interests, professional norms and the method with which they construct meaning in their work practice. Through this, bureaucrats are mostly self-regulatory. The consequence of this is that discretion is mainly dependent on individual preferences and the decisions of street-level bureaucrats are guided by beliefs and norms. This poses a number of governance problems when it comes to ensuring the desired implementation of a policy.

Impact of Street-Level Bureaucrats on Policy Implementation

The fact that street-level control is a challenge, makes the impact street-level bureaucrats have on policy implementation an important issue in the study of the implementation process. One of the key concerns is a governance concern. Since street-level bureaucrats are not elected or appointed by elected officials and exercise discretion that is not always easy to control, their decisions may undermine the goals of elected officials (Meyer and Vorsanger, 2007). Policy goals may be shifted in importance or distorted when street-level bureaucrats follow their beliefs and norms. However, some researchers argue that this actually can improve democratic governance in linking elected officials and citizens, though there is no conclusive evidence to support this.

Another issue to be addressed is the implication that discretion of street-level bureaucrats has on the citizens. Front-line workers are assumed to be professionals that can use their power of discretion for the benefit for the citizens that are affected. Though this can be an advantage it also complicates the relationship between regulators and target groups (Meyer and Vorsanger, 2007). Lastly, the impact of street-level bureaucrats on the achievement of policy objectives could be of great importance. Since front-line workers modify policies to the realities on the ground, the policy can ultimately improve its clock speed as well as its effectiveness.

Communication: According to Meyers and Vorsanger (2007), good cooperation and communication between policy makers and street-level bureaucrats is essential in order to decrease the consequential uncertainties of policy implementation. Though the long-term goals tend to be the same for both front-line workers and officials, short-time goals often vary considerably. While policy makers and officials aim at satisfying stakeholders, street-level bureaucrats' goals are to cope with everyday problems on the ground (Meyers et al., 2001). Findings on the extent of the impact of differences in short term goals and street-level discretion have been inconsistent. Nevertheless, researchers have identified a number of factors that impact street-level discretion, cooperation and ultimately successful policy implementation.

Political: Policies based on strong political consensus have a tendency to be well planned, have clear goals and means to achieve goals and hence are less likely to create inconsistent goals between the different actors (Matland, 1995). Reforms that are rooted in political compromises are often poorly coordinated and have contradictory directives (Meyers and& Vorsanger, 2007). Further inclusion of street-level bureaucrats in the policy making process as well as providing them with adequate information about the goals and means is important for a successful implementation (Hanf and O'Tool , 2006).

2.3.3Target Group Behavior

 Another key cluster of variables in the implementation of policies are the groups that the policy targets, citizens and/or firms. UNEP (1999) emphasizes the importance for community participation in order to improve implementability of an environmental policy. The NPE in Rwanda emphasizes the importance of making the public an important implementer, but the collective action problem has its roots in the question of how individuals act when trying to achieving a common goal. Everyone will, on the long-run, benefit from protecting the environment and ensuring sustainable resources. This makes the need for collective action vital.

Policy implementation participation looks at the way people get involved in the issues the policy addresses as well as programs launched under the policy. According to Muriisa (2001) and Mruma (2005) there are different ways of participation. Four levels Identified

1) Needs assessment (people participate in identifying problems in their area)
2) Program design (people help design the solution for these problems)

3) Ownership of programs (do people feel like they own the programs or are they burdens for them?)

4) Program management (are people involved in managing the program?)

According to Bulkeley and Mol(2003), The range of environmental issues has increased significantly over the past decades and the involvement of the public in different stages is therefore more important today than ever. They confirmed that non-participatory ways of policy making are illegitimate, undemocratic as well as ineffective. Another important issue when dealing with community participation is knowledge and uncertainty (Eden,1998). The predominant one way model of policy influence is a linear one that assumes information flows from science to policy and then to society (Ibd). However, this model has come under a lot of criticism in recent years and has been largely replaced by a "model of mutual negotiation and (re)construction of environmental knowledge" (Eden, 1998)). Knowledge of environmental issues as well as of the policy is hence important for participation and ultimately for a successful policy implementation. Public awareness of problems is an important tool for action (UNEP, 2000).
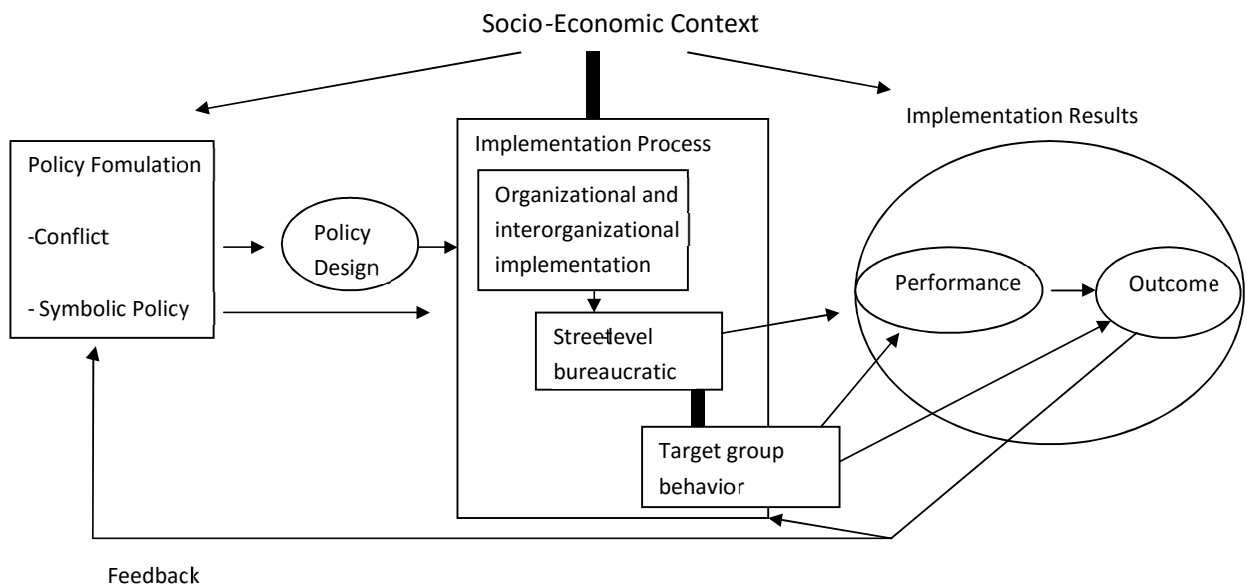
Figure 1: Policy implementation Process (Source: Winter, 2007)

2.4. EXPLANATORY MODELS

While winter provides a suitable analytical framework, the relations between the variables are not described and require the incorporation of explanatory models. There are different explanations on how the policy variables interact. While the rational and instrumental model assumes that policy makers think rationally at every stage of the policy process and have political control (Allison, 1969; Sutton, 1999; Christiensen et al, 2007). Other explanatory models amplify the importance of conflict-bargaining (Matland, 1995). Another possible explanatory theory is a symbolic policy model (Edelman, 1970; Matland, 1995; Böhringer, 2003). The way the variables relate to each other in the policy process is an important aspect in understanding the implementation of the NPE and enables for an outlook in terms of possible outcomes and output.

2.4.1 Rational / Instrumental Model

The notion that in order to achieve C, A has to do this and B has to do this, is a logical one. Christensen et al (2007) argue that when it comes to public policies, organizations present with 'instrumentally rational actions' (p.22). First a goal is defined and what it takes to go from the current state of affairs to the desired goal. Second, what alternative options are there? Thirdly, what are the consequences arising from these alternative options and finally, how and by whom will the decision of which road to take be made.

This rational model assumes that by creating the policy, the policy makers are aware of all possible implications an action has, as well as are fully aware of the capacity of the actors and policy instruments. Critiques of this theory (Simon, 1976) have argued that in a complex political system, it is not possible to be act fully rational, rather, 'bounded rationality' (Christiansen, 2007) is present. Goals are often diffuse and only a limited understanding of the alternatives is given. In terms of winters model the rational approach would explain the relationships as being strong and positive. In the initial stage, consensus on what needs to be done and how is present. After exploration of all alternatives, policy design is developed with clear goals and the design is based on the alternative with the best chance of reaching the goal (Christiensen et al., 2007). This rational model further assumes a close and positive relationship between policy design and the implementation process and ultimately outputs and outcome. Critiques such as Simon (1976) point out that the relationship between policy design and implementation is where the rational model is only realistic to a certain degree. Differences in goals and priorities, organizational problems,

capacity and political will, challenge the logical model particularly in the implementation and output and outcome phase.

2.4.2 Conflict-Bargaining Model

Another explanatory model emphasizes the importance of conflict and bargaining in understanding the relationship between the variables. While the rational model assumes that there is general agreement upon policy goals, this is often not the case with public policies. How intense this conflict is, determines the implementation process as well as output and outcomes. In a case where there is conflict, actors use bargaining. Matland's model of Conflict-Ambiguity, highlights this well.

| | | CONFLICT | |
		Low	High
Ambiguity	Low	Administrative Implementation	Political Implementation
	High	Experimental Implementation	Symbolic Implementation

Figure 2: Conflict-Bargaining Model Source: (Matland, 1995)

Winter pointed out that the policy formulation stage is characterized by the intensity of conflict and he argues that the intensity of conflict explains implementation behavior. Matland (1995) explained this relationship in more depth and provides explanations for the type of implementation in relation to the level of conflict and ambiguity. A policy with clear goals and means that almost all actors agree upon would then be close to the explanatory model of a rational approach. On the other hand if there is high conflict as well as high ambiguity on goals and means, a policy that is merely symbolic may be the result.

2.4.3 Symbolic Politics model

To know the function of a policy is essential in understanding a policy (Edelman, 1970). As Barrett and Tsui (1999) point out, research on the effectiveness of policies cannot be done without questioning the policies 'symbolic value and international relevance' (Barrett & Tsui, 1999, p.2). As Matland (1995) suggests, high conflict and ambiguity on goals of a policy, the policy is described as symbolic. Often controversial themes can end up as a symbolic policy since none of the policy makers can agree upon goals or means to reach these goals. If a policy has no clear direction, implementation becomes a big challenge. In many cases there is a strong emphasis on goals combined with a lack of means / capacity to achieve them. Edelman (1970) suggests that the more actors involved in a policy, the more likely the policy is to have symbolic nature. Reseearch (Howard, 1999) has shown that particularly environmental policies have a tendency to serve mainly symbolic goals. Both Matland (1995) as well as Barrett and Tsui (1999) indicate the likelihood of complicated, cross-sectional policies to be of symbolic nature.

Implementation of a symbolic policy is problematic by definition and, according to researchers (Matland, 1995; Edelman 1970) almost always impossible. This is not to say that symbolic policies do not have any value. Some policies are designed around the notion of taking position towards a certain issue. In such a case, implementation is from the beginning not considered necessary. Often changing power-relationships between actors sometimes require diffusion of power (Gustaffson, 1983). This can be achieved by a symbolic policy. In the 1980s for example decentralization policies were sometimes put in place for such a reason, serving mainly symbolic purpose (Gustaffson, 1983). Failure happens traditionally in the implementation phase. Edelman

(1970) however sates that if a policy is declared to be of symbolic nature before the implementation begins, certain goals such as ideological ones can be achieved. Besides Matland's and Edelmans theory on symbolic policies, Barret and Tsiu (1999) emphasize another explanation for symbolic policies. Particularly in the developing world, policies play an important rating when international funding is required. The adoption of certain policies are often prerequisites or determinants of how much funding a country or institution receives. This may, according to Barret & Tsui (1999) sometimes result in the development of a policy to please international actors and/or institutions, that on the national level can be best described as 'window dressing'.

2.5. FACTORS OF A SUCCESSFUL POLICY IMPLEMENTATION

 Before going into the various factors that influence successful or limited to failed implementation, a definition of successful implementation needs to be discussed. Throughout the implementation literature, this is a common source of conflict and disagreement. While there is little conflict about where implementation starts, namely after a decision has been made that needs to be put into action (Pressman and Wildavsky, 1973), less consensus can be found on where it ends. Some researchers argue it is the output while others place more emphasis on the outcome. There are several different definitions, mostly dependent on the approach of study. Representatives of the top-down approach for example tend to measure success at the achievement of specific policy outcomes. Those in contrast using a bottom-up approach define success as a program leading to a "positive effect" (Matland 1995). This however is not without controversy either, since a positive effect for one unit may not be positive for another. A positive effect in the case of the NPE could, for the government be continuous funding from aid agencies due to the implementation or ratification of the policy, rather than states policy goals such as decrease of deforestation. This highlights the need on the side of policy makers to clearly define what they consider as successful policy implementation. Achieving all outcomes the NPE is set to achieve, may take several decades. And though this is very important to keep in mind, this study concentrates on successful policy implementation. The implementation process as such is not so much concerned with policy outcomes rather than output. Ingram and Schneider (Ingram & Schneider 1990 in: Matland 1995) list several indicators for policy implementation success:

- Agencies comply with statutes of the policy
- Agencies are held accountable for reaching certain program goals
- Goals of the statute are achieved
- Local goals are achieved
- Improvement in political climate around the policy/program

In the case of the NPE in Rwanda, the MINIRENA defined success if agencies, organizations, local actors and target groups comply with the policy guidelines, highlighting further the concentration on policy output. Successful output will, if policy design and environmental factors allow, eventually pave the way to successful policy outcome (Winter, 2003).

2.6 NETWORKING

Implementation, as discussed in the previous paragraphs, involves different actors with different agendas. Coordinating and linking these actors is therefore important but also a known ground for differences. In many developing countries, establishing roles and responsibilities tends to be difficult Giving relative autonomy to NGOs and other street-level bureaucrats often makes the central government uneasy (Brinkerhoff, 1999). Donors tend to favor program with NGOs which in turn puts the central government in competition for limited resources, but NGOs again fear interference by the government (Brinkerhoff, 1999). The solution to point out this problem in developing countries are network arrangements where no one entity is in charge, which is not always easy to achieve due to the lack of trust, coordination, well established institutions and decentralization in many countries in sub-Saharan Africa (Brinkerhoff, 1999;Oosterveer and Van , 2009). Increased decentralization is, according to Brinkerhoff (1999) one way of addressing the issue if problematic coordination and linkages.

2.7 DECENTRALIZATION AND ENVIRONMENT POLICY

The French doctrine states: "One can govern better from far, but can administer better when closer" (Zaharia and Bilouseas, 2008). The NPE is based on the concept of decentralizing environmental management taking into account that environmental issues are cross-boundary issues and research has shown that they are better dealt with at the local level. According to Dennis (1999) decentralization is "the transfer of authority and responsibility for public functions from the central government to subordinate or quasi-independent government organizations or the private sector" and he has made a distinction between four types of decentralization as follows

1) Political decentralization deals with the transfer of power to citizens and their representatives

2) Administrative decentralization aims at redistributing authority and resources for public services to the local governmental level.

3) Fiscal decentralization is the establishment of the ability of local government to have adequate revenues. How this might be achieved can vary from government grants to self-financing.

4) Economic and market decentralization, which is divided into privatization and deregulation. Deregulation is the lift of legal constraints on the participation of private

corporations on previously governmental dominated spheres. Privatization on the other hand is the actual participation of these corporations.

Literature argues that it is not always possible to separate these processes. In rare cases political and administrative decentralization are happening independently. Mostly all forms are found to a certain extend though some might be stronger represented than others.

Environmental management has proven to be more effective when local actors are involved (UNEP, 2002). Research has shown that many decentralized environmental policies in Africa have failed (Blaikie, 2006; Oosterveer and Vliet, 2009). Among the main reasons for failure are the complex relationships between all involved actors at the background of mostly semi-decentralized systems. The additional burden of limited financial and human resources and high dependency on foreign aid hinders implementation of decentralized environmental policies

Osterveer and Vliet (2009) identified three tensions that have to be reduced when implementing decentralized environmental policies in sub-Saharan Africa:

1) Technical staff versus locally elected officials: Elected officials represent their constituents who in turn are often inconvenienced by the implementation of environmental policies. Hence, officials risk to not be re-elected.

2) District level versus national level: This is a general tension in decentralized systems. Which tasks remain at the center and which go to the Periphery? The more decentralized a system, the less this tension

3) Tensions between different policy domains: Environmental issues are not limited to one policy sector and generally touch many other domains. In developing countries there is a lot of competition over the limited resources and the benefits of an environmental policy are not immediately obvious. Other policy domains such as health, education and infrastructure development tend to be seen as more important.

NEP in Rwanda

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

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

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

a) To improve the health and the quality of life for every citizen and promote sustainable socio-economic development through rational management and utilization of resources and environment;

b) To integrate environmental aspects into all the development policies, in planning and in all activities carried out at the national, provincial and local level, with the full participation of the population;

c) To conserve, preserve and restore ecosystems and maintain ecological and systems functioning, which are life supports, particularly the conservation of national biological diversity;

d) Optimum utilization of resources and attain a sustainable level of consumption of resources;

e) To create awareness among the public to understand and appreciate the relationship between environment and development;

f) To ensure the participation of individuals and the community in the activities for the improvement of environment with special attention to women and the youth;

g) To ensure that the basic needs of today's population are met without jeopardizing the ability of future generations to meet their own needs.

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

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

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

3. The *National Policy for the protection and conservation of Environment, 2003*: clarifies in detail, the Government priorities and strategies for protection and conservation of the environment in Rwanda, including creation of appropriate institutional framework.

4. The establishment of the Rwanda Environment Management Authority (REMA), as an overall authority for coordinating and regulating the protection, conservation and management of the environment in Rwanda. REMA is also designated as the National Competent Authority for all international environmental treaties and agreements on environment.

5. The Rwanda Development Board (Environmental Compliance and cleaner production Unit) which provides environmental impact assessment (EIA) advice and ensures compliance, as part of the investor facilitation. In addition, RDB is responsible for wildlife conservation and tourism, having absorbed the former Office of Tourism and National Parks (ORTPN). While this may present new challenges, linking investment and business development could increase appreciation, among the business sector, of the need to conserve and sustainably manage the country's environment and natural heritage.

6. A national biodiversity conservation and management policy has been drafted. When approved, this policy will, inter alia, address the following issues: conservation of biodiversity outside protected areas; access to genetic resources and benefits sharing; agro-

biodiversity; bio-prospecting and biodiversity business; and managing biodiversity knowledge, including from research and indigenous knowledge.

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

Decentralization Policy Background and Context   in Rwanda

The decentralization policy was developed after widespread consultation on the causes of disunity among Rwandans. In those countrywide consultations, the citizens showed a remarkable desire to have a voice in the affairs of the state. The decentralization policy is an answer to that call. In 1998, about 70% of Rwandans lived below the poverty line and most of them living in rural areas. Pro poor policies had to be worked out in such a way that resources would be directed to where the poor live and in programs that would utilize the only resource available to them: unskilled labor. It was also hoped that with increased participation of the majority of Rwandans in resolving the day-to-day problems that are commonly faced, a spirit of nation-hood would permeate the decades-old divisions and thus help in the reconciliation process. (MINALOC, Rwanda decentralization strategic framework, 2007)

The program of democratic decentralization has completed 1st phase of implementation. In its implementation strategy published May 2000, decentralization is to be implemented in three phases:

The first phase of three years, was meant to institutionalize decentralized governance by articulating the policies and the legal frameworks, putting in place the necessary administrative structures, systems, and mechanisms; holding the grass root and local government elections, undertaking institutional and human resource (especially the elected) capacity building activities, and extensive sensitization of the population on the legal and administrative aspects of decentralized governance.

The 2nd phase (five years) is to entrench decentralized local governance by having it deliver on its promises to the population;

In this phase, special attention will be given to those areas, processes and procedures that:

a. Facilitate greater participation of the citizens in decision making, planning and implementation of their development programmes and projects;

b. Facilitate greater allocation of resources to the Local governments and grass root structures for their use in the processes of self-liberation from the poverty traps, increasing their productive capacities, plus enhancing their access to health services, education, information and above all, ensuring that they have enough to eat;

c. Give greater linkages to other political, social, judicial, administrative and economic reforms;

d. Allow better co-ordination of stakeholder interventions in the decentralization program and activities to create synergy in interventions and progressively shift from project support to programme support that would best bring about even development throughout the whole country as well as help to raise the national capacities to manage the reform process.

Particular attention will also be given to crosscutting issues of HIV/AIDS, gender, environment, and ICT-development in the implementation of this program.

The decentralization program is a long-term process that requires both political and financial commitments on the part of the reforming state and other development partners. Environmental Management at decentralize level (district) (MINALOC, Rwanda Five-Year Decentralization Implementation Programme, 2004)

Background

The Government of the Republic of Rwanda has opted for the policy of decentralization and good governance as a way of enhancing participation, transparency and accountability in compliance with efficiency and equity principles (MINALOC, Rwanda decentralization strategic framework, 2007). The policy of decentralization and good governance in our country aims at developing the required capacities for the kind of development which gives priority to the poor, promotes women's emancipation, protect and regenerates environment and creates the necessary opportunities for employment and other means of subsistence. The policy of decentralization and good governance introduced in Rwanda gives full authority to decentralized organs, namely Districts and/or Towns, in the fields of economy, policy and administration. Act No. 04/2001 of 13/01/2001 on the organization and operations of districts and owns defines their responsibilities. Districts and towns are responsible for agriculture, livestock and forests. They are also in charge

of land-use management, town planning, street cleaning, water supply, drainage, waste collection, treatment and disposal, maintenance of green gardens, parks and recreational areas, as well as the protection and management of environment. District or Towns committees responsible for the management of environment are provided for by the environmental law and are in charge of the implementation of policies and programmes for the protection of environment at the local level. The central Government will continue to be responsible for policy formulation and environmental planning, by passing laws and necessary regulations; monitoring and evaluation, organizing awareness, training and environment campaigns, and providing supporting advice to the needy decentralized institutions. With regard to Local Governments, they will be responsible for policy implementation, application of laws and regulations relating to environment, and see to the protection of environment under their authority on a daily basis.

Objectives and Mandates

DEMOs (District environment Management office) were established as units responsible for environmental protection within the borders of the District. As shown below, the proposed functions could be classified into planning functions and operational functions.

Planning Functions

- Participating in the development of the National Environment Action Plan (NEAP)
- Developing environmental protection plans of the District
- Assisting in the preparation of environmental contingency plans at the District level and assessing training needs and coordinate them with the concerned agencies
- Preparing environmental profiles of the District
- Participating in the preparation of the development and investment plans of the District and ensuring the incorporation of the environmental dimension

- **Operation-oriented Functions**

Involving, stimulating and activating the role of the NGOs and support its efforts in the field of developing and protection of the environment.

-Coordinating with the competent authorities in the District in reviewing EIA studies according to the agreement with REMA and following up the implementation of the environmental specifications in the EIA approval

-Implementing current environmental regulations. Preparing and implementing inspection and surveillance plans and receiving public complaints concerning environmental problems, investigating them and taking the necessary actions in coordination with the concerned agencies in the District.

-Following up the implementation of hazardous substances and wastes management and handling procedures in the District with the coordination and cooperation with the executive bodies.

The technical and financial requirements of the above functions differ according to the activities involved.

RURAL DISTRICT ORGANIZATIONAL CHART JULY 2010
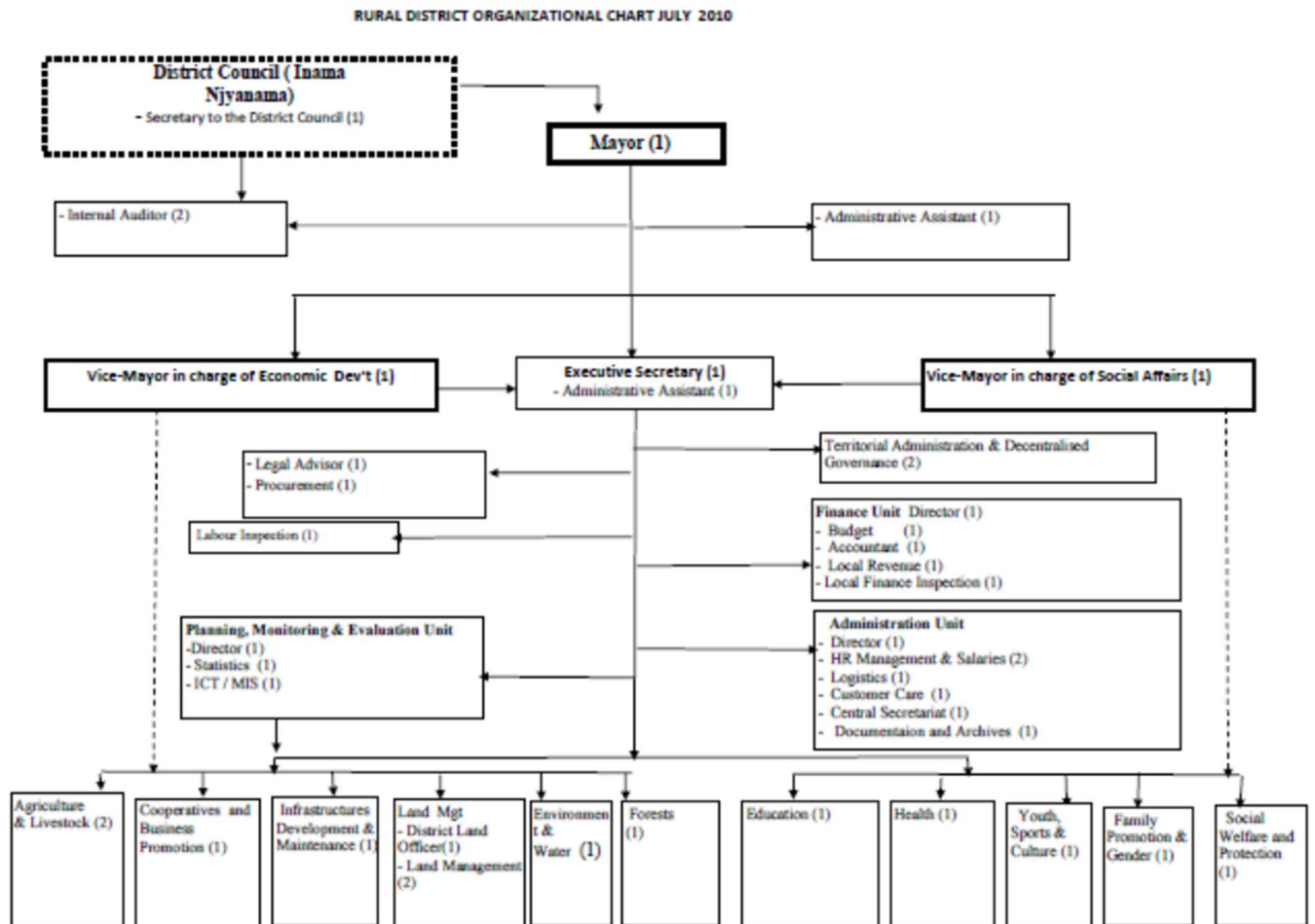
**Figure 4: Rural District Organizational Structure**

The DEMOs currently report both administratively and technically to the Executive secretary and the Mayor. They have the responsibility to follow up the implementation of Organic Law N° 04/2005 of 08/04/2005 determining the modalities of protection, conservation and promotion of environment in Rwanda and other environmental laws.

The educational background of the DEMOs forms a good basis for undertaking environmental activities. Currently, all the heads of the DEMOs have a degree of Bachelor of Science (B.Sc. of Engineering, Science or Agriculture), which is compatible with the requirements set by REMA. The majority of the DEMO staff has received higher education and their background varies between Engineering, Law, Agriculture, Science, and Arts.

Internally, neither the DEMOs nor the EUs have a clear organizational structure.

Distribution of Responsibilities

Within the District, the DEMO mandates represent an opportunity for higher efficiency and effectiveness in the implementation of EM functions. However, the nature of environmental functions is perceived as an intrusion in the domains of other entities. This becomes more critical in functions that are already undertaken at the District such as inspection, creating a higher potential for conflicts. This intrusion is also sensed in functions aiming at influencing decision making in related functions (e.g. EIA, incorporation of environmental dimension in the development plans of the District).
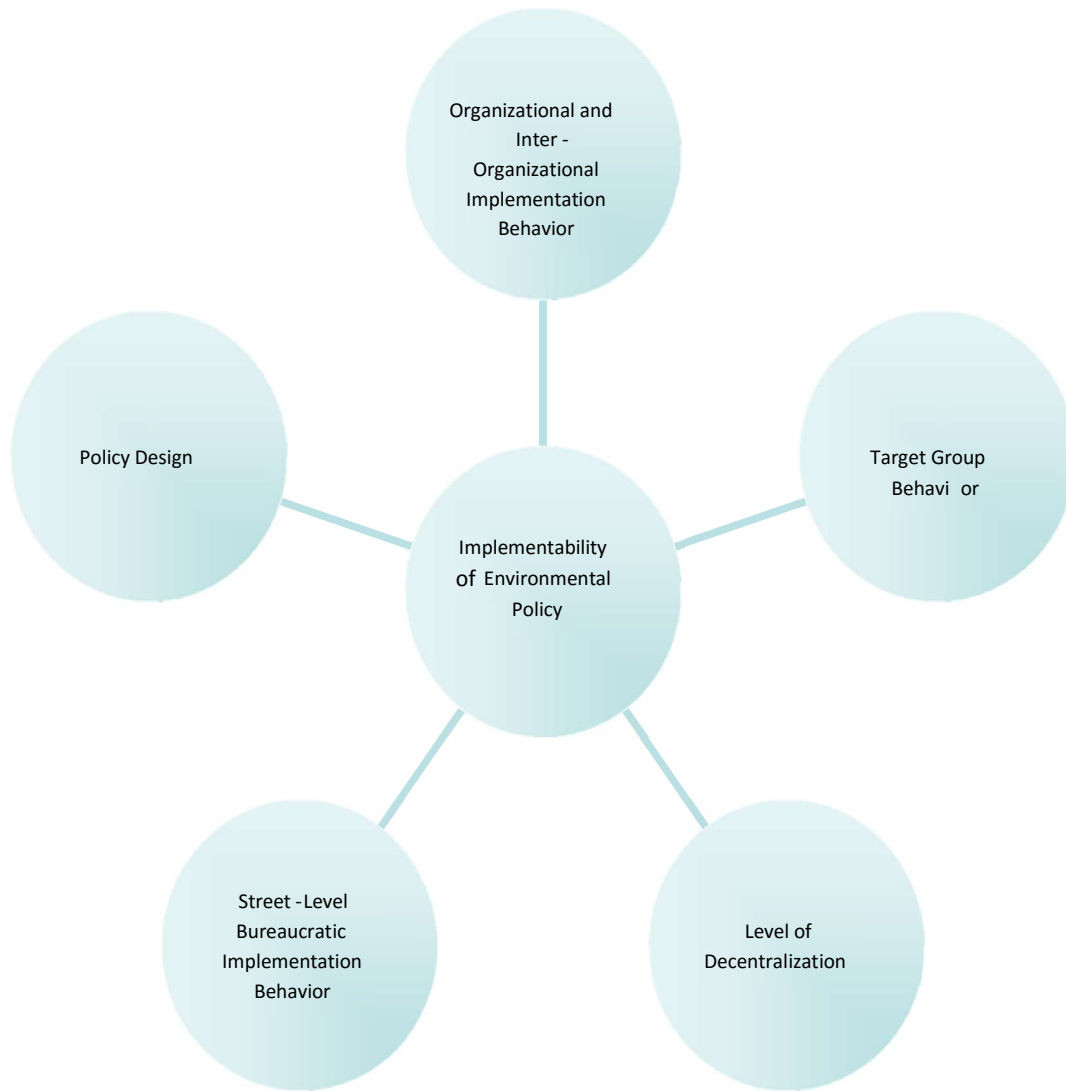
Figure 5: Summary of NPE Implementation

2.8 Summary

Measuring Implementability of the NPE depends on a number of independent variables. Using Winter's Integrated Implementation Model (Winter 2007) and setting it in the context of a decentralized environmental policy, we concentrate on the Implementation process and identify 4 independent variables that influence implementability for the NPE.Organizational and Interorganizational implementation behavior, street-level bureaucratic implementation behavior, target group behavior and the level of decentralization. The following chapter gives insight into the methodology of this study.

CHAPTER 3: METHODOLOGY

3.1 Study area

Rwanda is located in Central Africa between latitudes 1°04' and 2°51'south and longitudes 28°45' and 31°15'east. Its surface area is 26.338 sqkm. It is divided into 5 provinces, 30 districts the population of Rwanda is around Eleven million and the source of income is mainly agriculture.

The focus of this study was on 2 provinces, Kigali and Eastern Province. Kigali being the capital with a population of approximately 1,135,428 people (NISR, 2012) was sampled as an urban area. The Eastern Province, with the local governmental office in Rwamagana, was sampled as a local governmental representative. Using the capital city as central government as well as local offices enabled to employ a comparative approach as well as examine the state of decentralization the way the local government deals with region-specific environmental issues with limited infrastructure. In contrast, Kigali being the political and administrative center of the country as well as the largest city, is mainly dealing with "brown" issues such as waste, sanitation and pollution.
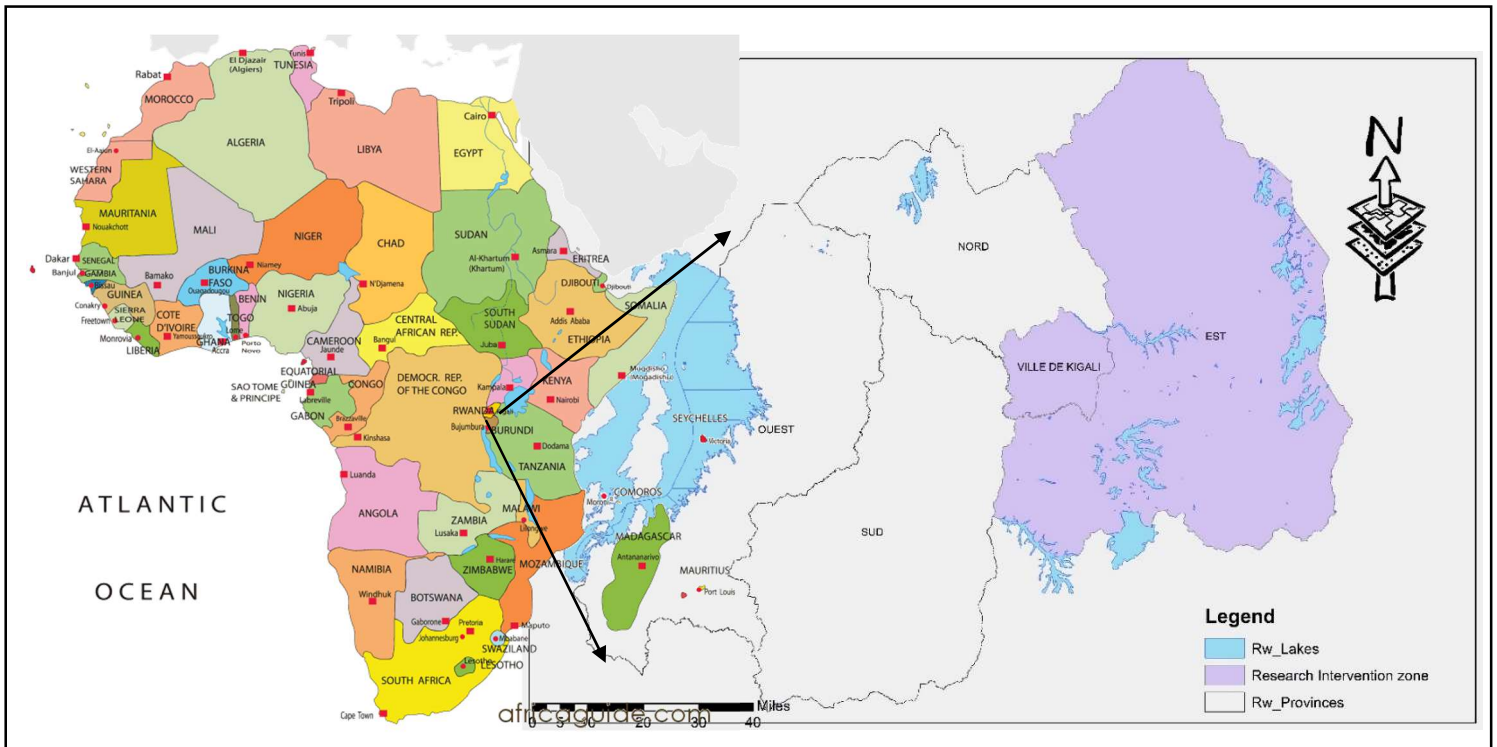

Figure 6: Rwanda Map showing the province of intervention in this research

3.2 Data collection

Data collected for National Environmental Policy (NEP) implementabilty included NEP design, Organizational and inter-organizational behavior; street _level bureaucratic behavior; and target group behavior. Other data collected were related to the level of decentralization of environment management (knowledge of population on environment management, waste management and resources allocated on environment management).

3.3 Data collection procedure

Both qualitative and quantitative survey was used during this study. According to Yin (1984), a case study investigates a contemporary phenomenon within its real-life context. The borders between the phenomenon and its context are not always obvious and multiple sources of evidence are used. Quantitatively, In-depth interviews, Focus group discussions, direct observations and desk review was used for data collection. A qualitative approach was employed which allowed this study to be both exploratory and explanatory through   asking open questions as well as observing the implementation efforts in a natural setting.

Organizational and Inter-organizational implementation behavior were operationalized through document review as well as interviews. Documents review has given an overview of how implementing institutions are structured, the hierarchy as well as co-operation structures and programs. In addition, In-depth interviews were conducted with officials in different organizations and institutions. Questions were asked to assess the level of co-operation and networking within the different organizations as well as attitudes towards cooperation.

Street-level bureaucratic behavior was researched using in-depth interviews with sampled front-line workers as well as officials. Target group behavior, community participation and knowledge were measured through focus group discussions in both Kigali and Rwamagana.

 The official documents desk review and in-depth interviews were used to investigate the level of decentralization in Rwanda. Interviews were carried out with officials from both the central government as well as the local government. Questions focused on decision-space, flexibility with allocation funds and co-operation with other implementers. Further interviews were carried out with an NGO and a private company in order to get a full picture of decentralization and privatization in the environmental sector.

3.3.1 In-depth interviews

According to Yin (2003), Interviews are one of the most important data-sources for case studies. Overall, four in-depth interviews were conducted with purposeful sampled respondents. The interviews were conducted in English, recorded and transcribed. Open ended questions including both questions about facts as well as opinions of the respondents were used in In-deep interviews with following leaders:

1) The Director General of Rwanda Environment Management Authority (REMA) was selected because the REMA is the main implementing and coordinating institution of the NPE. This interview allowed to gather information about how the policy is being implemented, how and if institutions work together, as well as to get insight about what the experienced and expected problems are in the implementation process.

2) District Executive secretary works as the link between the central government and the district, as well as the sub-district level in implementing the NPE. He was In-deep interviewed to give insight into the environmental problems particular to Eastern province, specifically the area in and around Rwamagana district. Further comparing answers with REMA have given an indication on the level of cooperation, information exchange and decentralization.

3) Executive Director of Rwanda initiative for sustainable development (RISD), a nonprofit organization that promotes environmental awareness. RISD is an example of an organized street-level implementer of the NEP and was selected as interviewee asked to examine cooperation between the central government and NGOs in the environmental sector as well as street-level bureaucratic behavior and the exercise of discretion.

4) Managing Director of COPED, a private Waste Management Company in Kigali. COPED is one of the largest private waste management companies in the country and services different areas in and around Kigali. The company leader was selected and interviewed to study the involvement of the private sector, the cooperation with the government in the implementation of the NPE.

3.3.2 Focus-group-discussion

To analyze target group behavior, community participation and knowledge as well as point out general attitudes towards environmental problems in the communities, four Focus-Group Discussions (FGD) were carried out. For this group discussion, two environmental cooperatives were selected in both Kigali and Eastern Province.

3.3.3 Direct observations

Direct, participant observations of environmental management in households as well as on the streets added to a more holistic picture of the situation in the field. Buildings, waste management in government buildings as well as casual discussions with people in the street were conducted.

3.4 Documentary data

Secondary data was collected through document and literature review. Legal documents and predecessors of the NPE were collected and analyzed. This review included drafts and different versions of the NPE. Other governmental documents and policies that deal with environmental protection and management were reviewed and analyzes to give   a better understanding of the legal and political framework of the NPE.

3.5 Data analysis

Primary data collected were analyzed in a qualitative and quantitative manner. Each Interview and discussion were recorded using a portable tape-recorder. After conducting interviews and Focus group discussions, the recordings were transcribed and translated/back-translated where needed. The transcribed interviews and discussions were then coded and put into a matrix of categories. According to Yin (2003), a descriptive approach was used to identify and overall pattern as well as a unit of analysis in focus group discussions, which covered a wide range of topics. In order to ensure validity of the results, the combination of different sources of evidence, was used following triangulation method of Yin (2003). The impact of the NPE implementation decentralization was incorporated and discussed via the three cluster variables.

Documentary data was analyzed using Søren Winter's Integrated Implementation Model (Winter 1990, 1994), focusing on the Implementation Process. However, this model does not offer explanations on the relations of the model's variables. For this study, three explanatory models were proposed. A rational/ instrumental model in line with Christiensen et al. (2007), conflict

bargaining according to Matland (1995) as well as a theory on symbolic policy implementation (Edelman, 1970; Matland, 1995; Böhringer, 2003).

Following winter (1993 and 1994), Policy design was analyzed to determine the extent of its implementability and to obtain additional insight into the social and political context in which the policy is set.

Cooperation of different government institutions was also analyzed to determine effectiveness of NEP implementation. The Street-Level bureaucratic behavior was analyzed because the NPE relies on street-level bureaucrats to a large extent for the implementation, service delivery as well as monitoring. The public (citizen, companies, and local non-governmental organizations) involvement in NEP implementation was also analyzed

CHAPTER 4: RESEARCH FINDINGS AND DISCUSSION

This Chapter analyses the research findings and the discussion will be based on the 4 independent variables that influence implementability for the NPE. Organizational and Inter-organizational implementation behavior, street-level bureaucratic implementation behavior, target group behavior and the level of decentralization

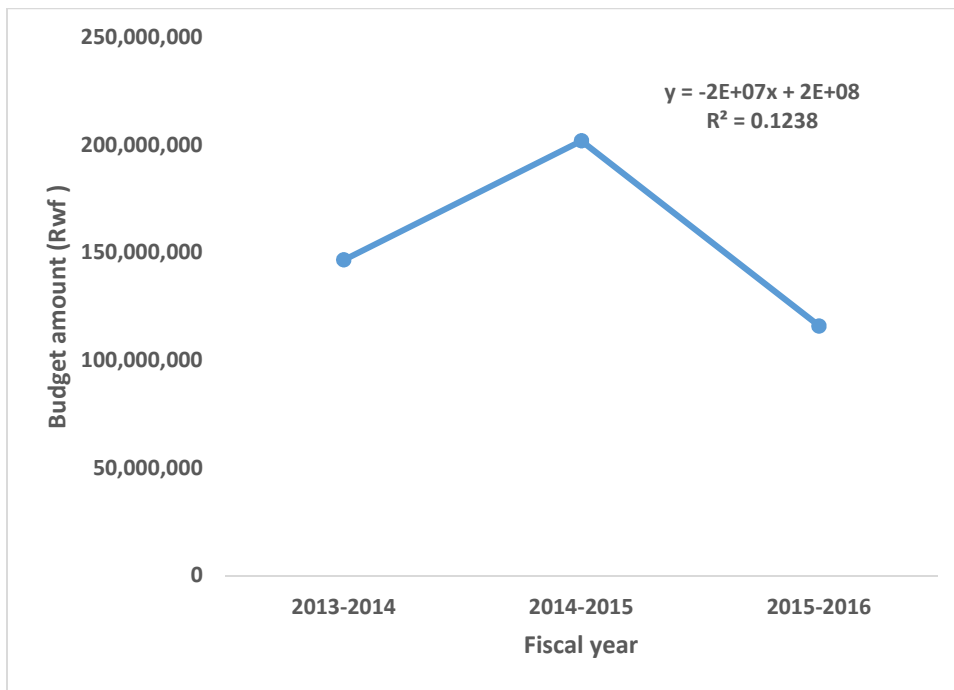## 4.1 ORGANIZATIONAL AND INTER-ORGANIZATIONAL IMPLEMENTATION BEHAVIOR

Reasons for cooperation

The circumstances and incentives that motivate people and agencies to work together have a crucial impact on the likelihood of a successful inter-organizational implementation. Environmental issues have long been conceived as not being very important in developing countries and hence fallen under the radar in terms of policy development. Though most policies include certain environmental consideration such as Health Care Reforms and even the Millennium Development goals, they have long been neglected when it comes to implementation. There is a lack of feeling of duty to protect the environments since other issues are considered to be more pressing.

If the policy and the problems it addresses are not seen as very important, what drives the different organizations to work together towards the implementation? Managing Director of RISD explained that the reason for collaboration comes from the outside rather than an inner drive. She further argues that many international donors set the ratification of a national policy as a condition for further support. It is therefore important for donors to expand the conditionality to the implementation phase of the NPE to avoid it being merely a symbolic policy (Matland 1995). O'Tool argues that exchange can sometimes be a good motivator for inter-organizational cooperation. In the case for the Rwanda NPE this is dependent on available resources. A certain organization might get additional tasks to handle but without the provision of adequate resources and no exchange, moral and cooperation is at risk of lowering.

Resources

The presence of adequate resources, as mentioned earlier, for the implementation is a very important issue in the cooperation between different implementing organizations in order to avoid the policy to end up as a "tack-on" programs (O'Tool 1984). According to RISD, resources are scarce and mostly come from outside the country. "The biggest challenge is actually to provide resources to be able to implement activities; the little resources that are there go more to the more obvious needs such as health and education. That is why most of our projects are dependent on external assistance." COOPED Director supports this stating that: "We have partners, not one specific partner but different partners. We partner with the communities. We have been working with the council and other private donors, mainly from abroad. We have also been working with other agencies like the Forest department under the MINIRENA but almost all the funding comes from abroad". This poses a risk for long term development and management of environmental issues. Funds that come from abroad or various donor agencies, are not sustainable on the long run. A donor agency can decide at any time to cut its donations or might decide to use them for another agenda. It is therefore important to enable the different organizations and institutions to raise their own revenue and allocate a certain amount towards environmental protection.

$$y = -2E+07x + 2E+08$$
$$R^2 = 0.1238$$

Figure 7: Budget allocated to Environment management in Rwamagana district

Mandates and Roles

According to Research (O'Tool 1984, Bardach 1977, Howlett & Ramesh 2003), interorganizational implementation requires a distribution of clear mandates and roles for all actors involved. Different agencies and organizations have different priorities and interests and conflicts between them and the policy goals can often lead to a lack of implementability. The implementation of the NPE involves a large number of organizations and institutions from various policy areas. The policy document provides a clear mandate for the REMA as the coordinating institutions and gives it the directive to apply roles and ensure that everyone knows their role and duties. The policy itself is not specific about individual responsibilities and only emphasizes that the REMA has to work closely with the district governments. By the nature of it being a national policy, the REMA is a national institution and have restricted capacity to deal with sub-region or cross-border environmental issues. UNEP addresses the problem of lacking mandates (UNEP 2002) and emphasize that there is a lack of decentralization and capacity for decentralized environmental management in most countries in Sub-Saharan Africa. While border-crossing programs exist within the region, there is no strong institution with a strong mandate and therefore enforcement of policies and programs is limited.

Enforcement of Authority

O'Tool (O'Tool 1983) stressed the importance of strong enforcement of authority for well-functioning corporation between organizations. If authority is absent, cooperation will be weak. The NPE puts REMA in charge of monitoring and auditing the implementation and following of guidelines in all the line ministries, local authorities, private sector, NGOs and the public. However, REMA is a relatively weak institution. It has only been established in 2002 and is not yet respected as having authority over other line ministries. There appears to be a hierarchy of power between the different ministries. While ministry of health, finance, justice and mines are the powerhouses of the country, the environmental sector has yet to earn its power to speak. The capacity of the REMA is also fairly low and as a result the enforcement of the NPE proves difficult.

Conclusion

Organizational and Inter-organizational implementation behavior in Rwanda's implementation of the NPE is characterized by a lack of strong institutions and communication between them. Organizations are overburdened in utilizing the few resources that are available. There are few incentives that encourage organizations to co-operate in the implementation and the ratio of cost versus gain is unevenly distributed towards costs. The NPE is mainly a tack-on program which demands organizations to add additional responsibilities to their tasks without providing necessary resources. This lowers the willingness to co-operate. Generating revenue is still however still problematic and most programs rely heavily on foreign investment.

4.2 STREET-LEVEL BUREAUCRATS AND IMPLEMENTATION OF THE NPE

Street-level bureaucrats are in a critical position as far as the implementation of the NPE is concerned. They are on the ground, shaping the actual delivery of the policy and interact with both the public as well as the institutions.

Considering the imbedded nature of street-level bureaucrats, the question of who controls their actions and to what extent is important. According to research political control tends to be limited. In Rwanda, many NGOs though part of the policy program are financed from abroad and hence do not financially rely on the government. This in turn, limits the extent of control that the national level can exercise on them. Managing director of RISD Rwanda explained that the NGO collaborates with the government, particularly the MINIRENA on certain projects but there little control is being exercised from the government.

At the end of a program a written report is to be handed in to the MINIRENA who then review and decide if to involve the NGO in further projects. Private companies have also been involved in implementing the NPE. Among the most involved are private waste management companies. They are being subcontracted by the district council and given a certain number of routes within an area. In order to get these routes a license has be acquired and a contract signed that enables the District to monitor and evaluate the work of the companies. District is supposed to control the availability of trucks for hazardous waste and the general practices of the companies.

Dumping sites are state owned and the waste management companies have to pay a fee for every truck of waste that enters the dumping site. However, the Managing director of COPED, one of the biggest private waste management companies in Kigali claims that inspection rarely happen and the general cooperation with the government is slow. In the franchise agreement the

company is supposed to report any problem such as people that do not pay the pick-up-fee or companies that do not follow rules and regulations, to the District and MINIRENA. But the director emphasizes that there is a lack of enforcement and in most cases the companies do not bother to report to the government any problems because they lack manpower to deal with these issues. The complexity and lack of capacity results is street-level bureaucrats making discretionary decisions on a regular basis.

Communication

In order for discretionary decisions to be aligned with the policy goals, extended knowledge of these goals needs to be communicated well (Hanf & O'Tool , 2006). The civil societies, like RISD, they are aware of the policy design and goals as well as programs. Most of these NGOs use funds from their donors to support government to increase NEP awareness at grassroots by training different entities in relation to environment managements. This has shown the big role played by NGOs in NPE implementation.

> **Box 1**
>
> *"As a civil society experienced in advocacy capacity building of grassroots, we work in collaboration with governmental institutions during policy design, as experts of ground dress needs of populations. This collaboration does not ends in policy design, because we intervene in policy implementation. When we are training local leaders in land /environment policy, I think it is a great contribution to NEP implementation at local level"* **Annie Kairaba said.**

There is a strong communication between government of Rwanda and NGOs. For instance all the NGOs working in Rwanda are involved in policy design process and the final product as report is given to them to show how their ideas were put into consideration (Box 2).

> **Box 2:**
>
> *"The government of Rwanda through REMA, as an institution leading the pollution formulation, implementation and monitoring, they called us as a civil society dealing with wastes management, for meetings of policy validation and provide documentation about the policy at each stage until its official implementation. This has increased our awareness about the policy and challenges of wastes managements were highlighted and included in the NEP".* **COPED managing director** said.

Resources

The more scarce resources, the more services are being rationed by street-level bureaucrats. In the case of the Rwandan NPE resources for street-level bureaucrats mainly come from either outside funding or from revenue raising. Very little fiscal dependence on the central government is present. Many NGOs such as RISD Rwanda are relying to 89% on foreign investment and funding. NGO's such as RISD Rwanda are also dependent on external resources.

> **Box 3:**
>
> *"We have been working with the council and private donors, mainly from abroad. We have also been working with other agencies like the land department under MINIRENA but almost all the funding comes from abroad".* **RISD Managing director** said.

Most of these resources are program based and can seize at any time. This makes long term capacity difficult, not only for RISD but also other NGOs has gone through months with no revenue and no funding. The result is many people do not work fulltime for NGOs but rather consider it their duty to contribute their free-time to implementing the NPE.

Many private companies on the other hand raise their own revenue to support their work. For instance COPED charges every household, market or firm that is being serviced a monthly amount in order to pick up waste. This is a sustainable way for the company, even in the face of many subscribers not paying or delaying payment. On the other hand, charging waste collection fee to individual households in a poor environment, results in many households getting rid of their waste in a different and not environmentally friendly manner such as burying it in their backyard. In Rwanda a "polluter-pays" principle legally mandates people and firms to dispose of their waste working well.
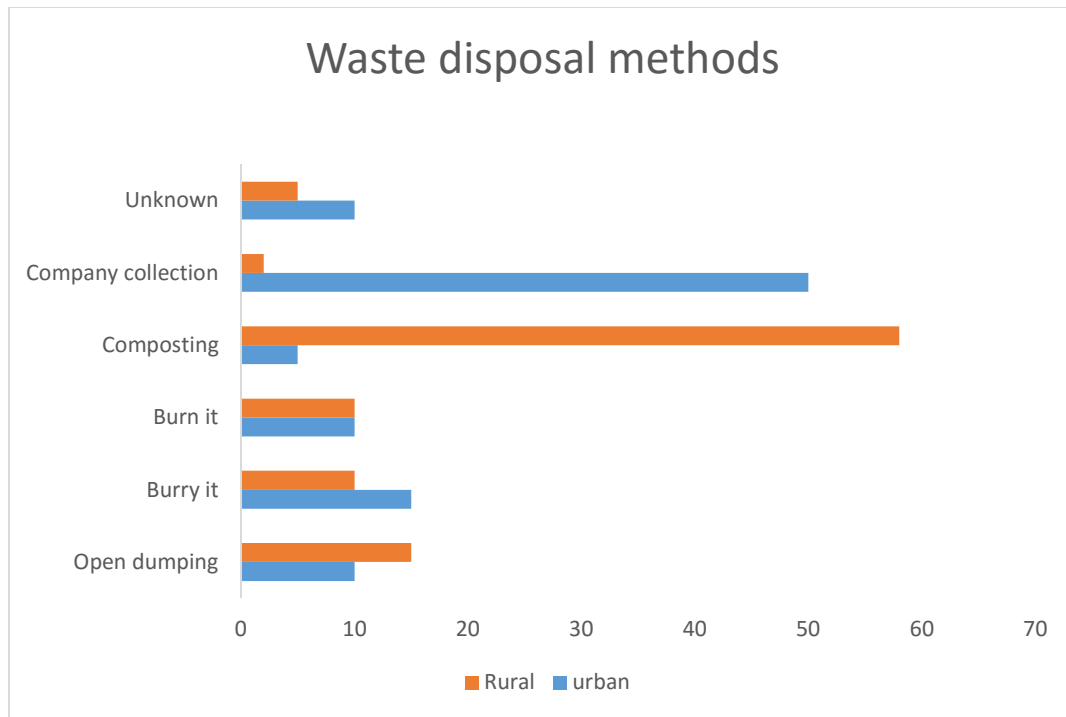
Figure 8: waste disposal methods

Figure six indicates how respondents dispose of their household waste. The majority (60 %) from rural area compost their waste, 55% from urban area use the company collection method and 20 % use the open dumping. only 10% bury or burn it.

If there is a lack of government funding of street-level bureaucratic work, this can have a direct result in the service delivery and implementation of the policy. The government support the implementers financially, managing director of COPED concludes, and as a result, the street level implementers feel obliged to implement the policy.

In order for discretionary decisions to align with the overall policy goals, communication of goals and strategies needs to be present. Policy goals are well communicated and a short-term policy goals is present. The feedback-process between policy makers and street-level implementers has worked well in some cases, making it possible for policy makers to adapt and change the policy to the situation on the ground. An additional limitation roots in the lack of funds for implementation and many street-level bureaucrats are dependent on outside funding.

4.3 COMMUNITY PARTICIPATION IN THE IMPLEMENTATION OF THE NPE

Agenda 21 (UNEP1999) emphasizes the importance of community participation in environmental policy implementation, since their participation increases the effectiveness of any government policy on environmental affairs.

The NPE is based on the principal of decentralization and the involvement of the community is among the key objectives. "*To involve civil society in general and local communities in particular, in environmental planning and actions at all levels and empower them to protect, conserve and sustainably utilize and benefit from the Nation's natural resources*" (NPE 2007, p.24).

In chapter two, key factors have been discussed that improve implementability of a policy that relies to a large extent on the public participation.

This chapter will discuss these factors, using FGDs.

1) Knowledge and Awareness

2) Mode of participation

3) Collective Action

Knowledge and Awareness

In order to participate in solving environmental problems, the public must first be aware of them. Awareness of both the problem and the impact that humans behavior and actions have on the environment. The NPE covers a wide range of issues, some require more participation of the public, while others are outside the public's reach. These include improving sustainability in the mining sector as well as industrial pollution, to name but a few. Most environmental issues stated in the policy however, are directly affecting everyday life and the quality of live in Rwanda.

 An important aspect of knowledge and awareness is the conceptual meaning of the term environment. The NPE defines environment as: " *The Ecosystem of which mankind is part*

including cultural and man-made features sometimes defined as the complex set of physical, geographic, biological, social, cultural and political conditions that surround an individual or organism and that ultimately determines its form and nature of its survival." (NPE 2007, p. iv). The MINIRENA defined environment with an exact quote from the NPE, while COPED

Managing Director addressed the complexity of the term and that it was difficult to summarize in a few sentences. The following table shows how respondents of the FGD's defined the term environment.
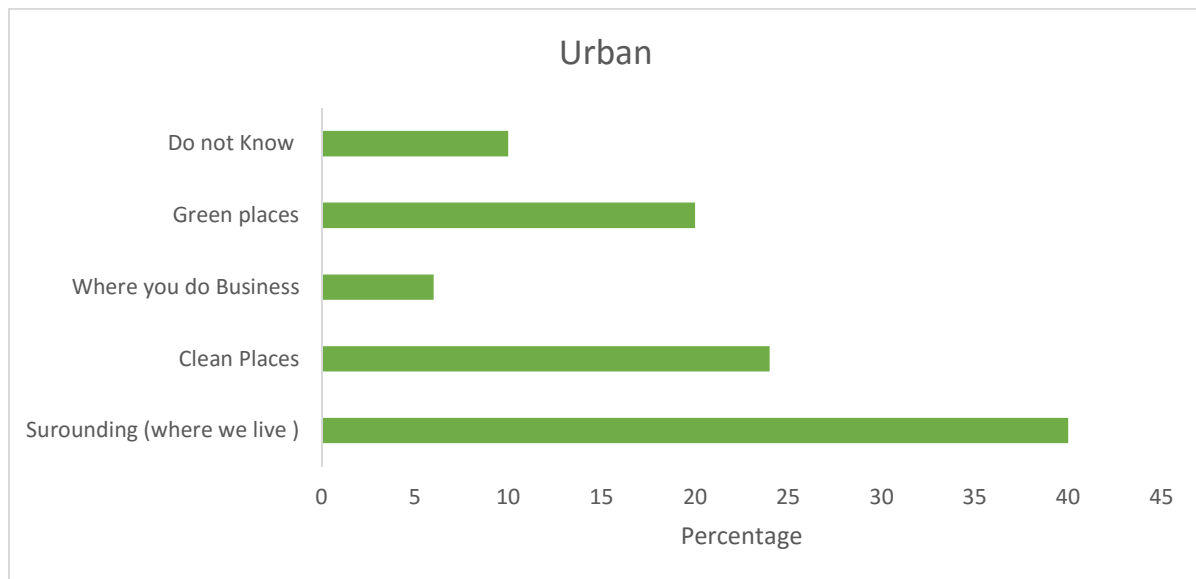

Figure 9: Definition of Environment according to respondent from urban area
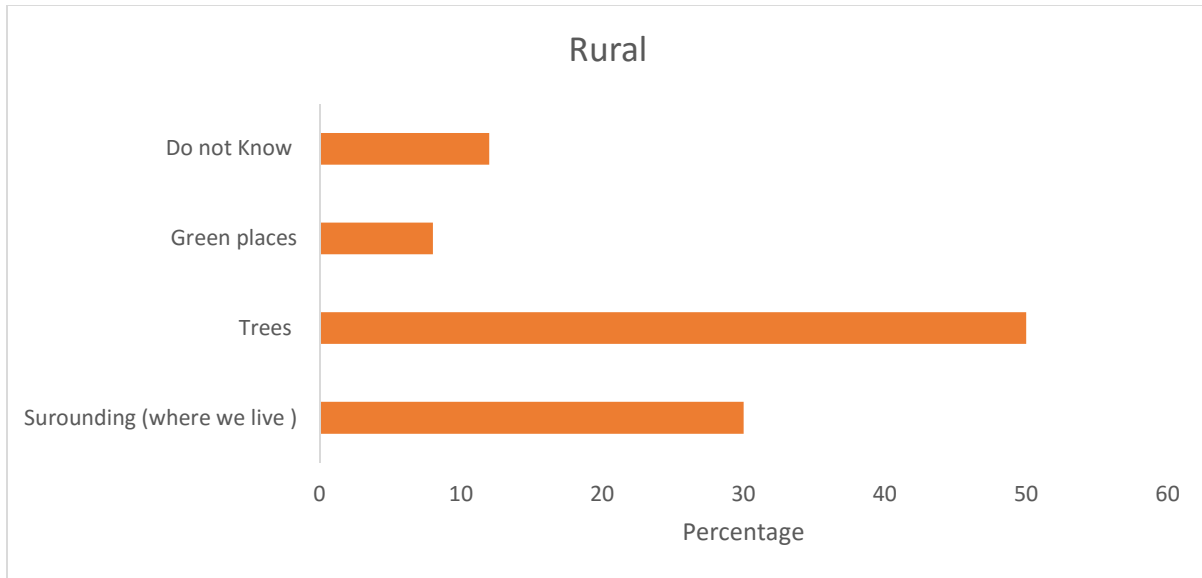
Figure 10: Definition of Environment according to respondent from rural area

There are different definitions for the term environment, all of which come with a different conceptual meaning (Stapp et.al 1970). Figure 9&10 shows that 50% of respondents defined the environment as their surrounding or the place in which they live, also 10% of respondents said they did not know what the term meant. 20% respondents said that environment means a clean place and 50% of respondents defined it as trees. This indicates further need to raise awareness and explain to people the meaning and concept of the term environment and all it encompasses. RISD Rwanda said they incorporate this aspect of environmental education into their programs. REMA explained that awareness campaigns have been launched that aim at explaining environment and environmental concepts to the public.

Understanding what the environment encompasses, makes the identification of environmental problems easier. Effective community participation requires a collective agreement on the main issues of importance (UNEP 2002).
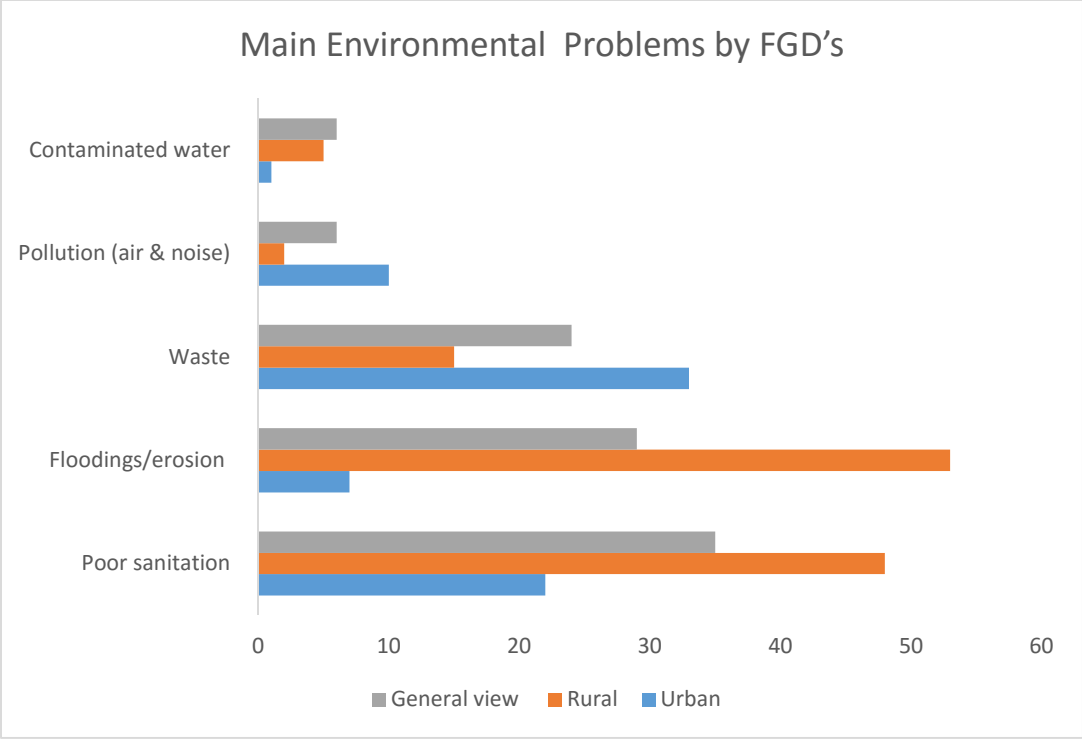
Figure 11: Main environmental problems by focus group discussions
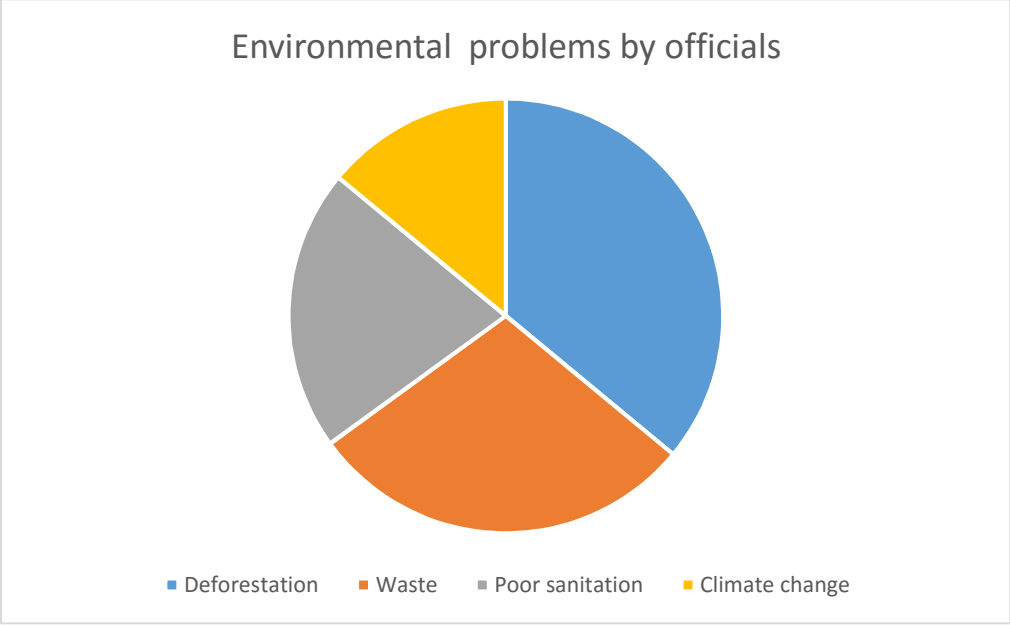
Figure 12: Main environmental problems by officials

Figure 11 and 12 shows the main environmental problems identified by both officials interviewed and respondents of the FGDs. All official institutions interviewed stated that the most pressing environmental problem in Rwanda right now is deforestation. When discussed in the FGD's most respondents indicated that they did not know what the term meant. After the concept of deforestation had been explained, the majority indicated that they were not aware of the problem and impact of deforestation. On other issues such as poor sanitation and waste, consensus was identified.

This is also supported by the report of the Centre for Resource Analysis where they confirm that Deforestation, soil erosion, degradation of river banks and lakeshores, overgrazing, wildlife poaching and desertification are the key environmental problems facing Rwanda (Centre for Resource Analysis, 2006)

Findings show a need to raise awareness about environmental issues such as deforestation, climate change and human settlement. The statement that some sources of energy can be harmful for the environment was turned away as a ridiculous statement by the majority of respondents and hence also needs further awareness campaigns.

The NPE requires schools to teach environmental education. According to RISD RWANDA, these teachings are incorporated into the geography lessons and mainly as a lecture. The NGO expresses concern about these methods of teaching. Environmental education needs to be taken out of the classroom and design with practical activities.

As concerns waste management, knowledge is very limited and advocacy is crucial. With 64% of the population living below the poverty line, it is a big challenge to tell them to spend money on waste collection firms. In addition, illegal waste collectors cover households with wheelbarrows, charging a fraction of the price, and then disposing of the waste in an illegal manner. FDGs revealed that the majority of respondents did not know what possible negative effects the burying or burning of trash has on the environment as well as their communities. Knowledge of the existence of the NPE was very high with only 7 % of respondent have not heard about it. (See figure 13) There has been many awareness campaigns after that and many people that are supposed to be implementers of the policy are aware of its existence.
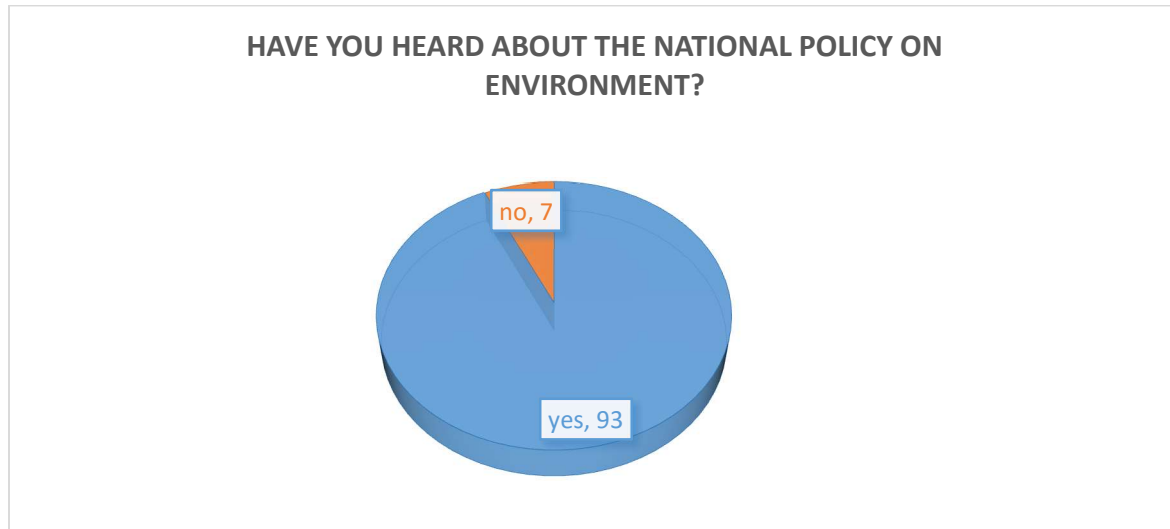
HAVE YOU HEARD ABOUT THE NATIONAL POLICY ON ENVIRONMENT?

no, 7

yes, 93

Figure 13: Knowledge of the existence of the NPE

Mode of Participation

Participation comes in different forms or modes as discussed earlier. Research has shown that the more involved communities are in different aspects of policy participation, the higher implementability of the policy (Muriisa 2001 in: Mruma 2005).

1) Needs assessment

   People and communities are faced with environmental problems on a day to day basis and therefore in a good position to participate in the identification of problems. In the case of the NPE communities were involved in this process. Governmental representatives took an environmental assessment of RWANDA with involvement of the communities. Rural communities incorporated people via meetings where everyone can air their thoughts.

2) Program Design

   Once the problems had been identified, a solution had to be formulated and designed. Involving the communities can be particularly helpful in respect of implementation. If communities develop a solution they are more likely to implement them daily. Policy formulation of the NPE happened on ministerial level, though some local governmental

representatives were involved. Utilizing the knowledge of traditional practices that helped sustain the environment would have added to fit the policy to local needs. As with needs assessment, rural communities and small towns have town meetings in which the communities can give ideas to how to solve environmental programs in the area. In Kigali at such meetings companies that are planning projects address the town population and give them the opportunity to address issues or questions concerning the environmental impact of these projects.

3) Ownership of programs

It is important for people to feel like they own the programs they are supposed to implement. Decentralization aims at involving the target groups in the implementation on a daily basis. Since the communities were involved in the development of the policy and its programs, feeling of ownership is high. Respondents feel incorporated or validated by the government.

4) Program Management

Programs under the NPE are managed by various organizations ranging from government organizations and line ministries to private companies and NGOs. Local communities are being involved in the management in the rural areas of the country. In the cities their main duty is implementation.

CHAPTER 5: CONCLUSIONS

5.1 Conclusion

It was the aim of this study to analyze feasibility of the implementation of the NPE. Rather than measuring policy outcomes at this stage, the aim was to look at the preconditions of the policy and apply process evaluation.

This research investigated both the context of local administration and the characteristics of environmental management. It found that environmental management at the local level is subject to the compounded effects of the obstacles faced by the local administration, the complex nature of environmental management, and the lack of assimilation of environmental issues at the national level. Environmental conditions suffer as a result, and there is a need for substantial modifications to improve the situation and address the barriers and obstacles facing an effective DEM.

A consistent vision as related to the responsibilities of different parties on the local and central level is lacking, and ad hoc interventions in the different fields of environmental management and protection are less effective than desired. There is a current focus on improving executive operational functions at the local level, which are faced by real technical and financial constraints It is important to note though, that community participation and support for the NPE is relatively high in rural areas where the community is well informed and incorporated in the implementation. The community feels like they are being heard and taken seriously, which in turn makes them more likely to participate in community action.

5.2 Recommendations

An effective environmental management system at the local level should include both operational and planning functions. Planning functions may take a lower priority and be faced with more constraints including weak planning capacity at the local level, limited financial flexibility, and inconsistent decentralization trends.

Improved functions should lead to the enhancement of the local environment through:

- Higher investments from the regulated community subjected to more targeted enforcement

- Private investments in infrastructure through the privatization of functions traditionally borne by the District

- Pollution prevention through forward-looking planning

- Greater efficiency in using available resources

- Strongly justified requests to the central budget.

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