

**Policy Networks and Environmental Policy-Making and
Implementation: The Case of the Pietermaritzburg Chamber of
Business (Msunduzi Municipality).**

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DECLARATION

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. None of the present work has been submitted previously for any degree or examination in any other University.

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Abstract

Public policies are not designed and implemented in a vacuum. Instead, policy design and implementation are processes which require that all relevant stakeholders be involved in all stages of a policy process. It is for these reasons that this study was undertaken. Environmental policy implementation has proved to be a challenge for most municipalities in South Africa. The municipality which was chosen by this study as a case study is Msunduzi Municipality. Faced with different challenges which are attributed to a lack of resources and appropriate forms of organisation which are required for environmental policy implementation, this Municipality has struggled to meet its responsibilities. It is for these reason, then, that this study argues that one of the possible ways in which effective design and implementation of environmental policy in Msunduzi Municipality could be achieved is by collaboration and partnership through policy networks involving government agencies, businesses and civil society organisations.

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LIST OF ABBREVIATIONS

AQEMF	Air Quality & Environmental Management Forum
BEE	Black Economic Empowerment
CBO	Community-based Organisation
CSO	Civil Society Organisation
CEO	Chief Executive Offices
DAEARD	Department of Agriculture, Environmental Affairs & Rural Development
DEAT	Department of Environmental Affairs & Tourism
DUCT	Duzi-Umngeni Conservation Trust
DTI	Department of Trade and Industries
DWAF	Department of Water Affairs and Forestry
EIA	Environmental Impact Assessment
EMCA	Environmental Management Co-Operation Agreement
GIS	Geographic Information System
GREEN	Greater Edendale Environmental Network
IDP	Integrated Development Plan
IEM	Integrated Environmental Management
ISO	International Standards Organisation
IGF	Inter-governmental Forum
IGR	Inter-governmental Relations
KPCA	Keep Pietermaritzburg Clean Association
LA21	Local Agenda 21
MEC	Member of the Executive Council
MINMEC	Minister and Members of the Executive Council
MOSS	Metropolitan Open Space System
NEMA	National Environmental Management Act
NGO	Non-Governmental Organisation
NIEs	Newly Industrialized Economies
NPM	New Public Management
NPO	Non-profit Organisation

PCB	Pietermaritzburg Chamber of Business
PMB	Pietermaritzburg
SACCI	South African Chamber of Businesses & Industries
SALGA	South African Local Government Association
TIKZN	Trade and Industries KwaZulu-Natal
TLC	Transitional Local Council
UKZN	University of KwaZulu-Natal
WESSA	Wildlife and Environment Society of South Africa
WCED	World Commission on Environment and Development

CHAPTER ONE INTRODUCTION

1.1 Background and outline of the research problem

It has become more like a norm for developing countries, such as South Africa, to try to achieve rapid economic development, but often at the cost of the environment. The challenge of environmental policy making and implementation in developing countries is therefore to enable economic development, while protecting the environment. The reality is that developing countries often do not have the capacity to implement environmental policy. So, how then can compliance be obtained?

It is a common understanding that developing countries are faced with the challenges of socio-economic underdevelopment and are therefore less likely to abandon industrialization and development in order to save the environment (World Bank, 2000:23). This trend has led to most countries experiencing high rates of environmental damage, because they are unable to strengthen, let alone enforce, environmental regulation that might risk chasing away industries which bring about employment in those countries. For example, under traditional regulation, environmental damage above the legal limit is punishable by fines, plant shutdowns, or, in extreme cases, imprisonment of offending managers. But such an approach requires strong enforcement mechanisms. Regulators have to monitor and analyze pollution from each plant, determine whether it has violated the rules, and institute legal proceedings in cases where violation is clear. These steps are not cheap, but they require capacity within public environmental authorities, especially municipalities and most have not been able to achieve this capacity to implement them (Nel, 2002:22-36 and Heydenreich & Barlow-Weilbach, 2003:6).

1.2 Objectives of the study

This study was designed with the aim of investigating options that can be explored and employed especially by public environmental managers to manage the environment in a better way. Since modern governance is often pursued through such mechanisms as collaboration and partnership, this study aims to explore if these options can prove to be feasible to manage the environment in South Africa, using the Msunduzi Municipality as a case. This study will argue that through collaboration and partnership between and among

government agencies, public and private businesses and industries as well as civil society organizations (CSOs), environmental management policy can be managed and implemented more successfully, easily and progressively than when government agencies that are mandated with this responsibility act on it alone.

1.3 The position of South Africa

In South Africa, there is different legislation including the National Constitution, which gives provisions on the management of environment. There is the National Environmental Management Act (No. 107 of 1998) (NEMA), Air Quality Act (No. 39 of 2004), and other related prescripts.

However, with regards to implementation of these policies, South Africa is still facing the challenge of building the capacity that is required to implement these policies efficiently and successfully. Some progress has been made in forging partnerships with different stakeholders, especially industries. Among such initiatives has been the adoption of Local Agenda 21 (LA21) and “the establishment of Environmental Management Co-operation Agreement (EMCA), which is a co-regulatory instrument, whereby an interactive relationship between the regulator (state authority) and the regulated (especially industries and businesses) is established to improve the environmental performance of the regulated beyond or in compliance with legal requirements” (DEAT, 2000:10). However, these initiatives have not yet produced anticipated results, which is attributed to issues related to lack of political will and a lack of capacity, especially from the government’s side, to engage relevant stakeholders. These are among the challenges that cut across all spheres of government from the national, provincial and local governments, and they are further worsened by inadequate intergovernmental relations (Tapscott, 2000:119). Similar inter-organizational challenges are being experienced in Msunduzi Municipality.

1.4 The profile of Msunduzi Municipality

Msunduzi Municipality came into being in December 2000, following the new post-apartheid demarcation of municipal boundaries. After the December 2000 election five previously independent entities were amalgamated to form the Msunduzi Municipality: Pietermaritzburg - Msunduzi Transitional Local Council (TLC); Ashburton TLC;

Vulindlela (rural); Claridge and Bishopstowe (Msunduzi Municipality Business Report, 2008:38). At present towns within the Msunduzi Municipality include: Ashburton, Claredon, Elandskop, Imbali, Kanzakane, Mkhondeni, Northdale, Pietermaritzburg, Sinatingi, Sweet Waters and Thornville (Local Government in South Africa 2004-2006, 2006: 632-635 and BESG, 2003:7). The Municipality now forms part of the UMgungundlovu District Municipality. With successive changes to the boundaries of the municipal area over the years, Msunduzi Municipality has grown substantially larger; both in area and population size. The Municipality also absorbed a number of impoverished rural areas that formerly fell outside of its area of jurisdiction (Local Government in South Africa 2004-2006, 2006:632-635).

The Msunduzi Municipality is located along the N3 at a junction of an industrial corridor from Durban to Pietermaritzburg and an agro-industrial corridor stretching from Pietermaritzburg to Escourt. On a regional scale, it is located at the cross section of the N3 corridor and Greytown Road corridor to the north, a tourist route to the Drakensburg and Kokstad Road to the south. It is coded KZ225 on the Municipal Demarcation Board and is the second largest urban centre within the province of KwaZulu-Natal, with Pietermaritzburg as the economic centre of both the Municipality and the KwaZulu-Natal Midlands region accounting for about 80% of the region's turnover within UMgungundlovu District Municipality. Its location has a strong influence on regional channels of investment because of being the administrative capital of the province, and central to the structuring of the provincial spatial framework for growth and development (Local Government in South Africa 2004-2006, 2006: 635-637).

The Municipality has a population of over 616,730 inhabitants, the majority of whom live in Pietermaritzburg (+/-197 590), the township of Edendale (+/-176 320) and the semi-rural area of Vulindlela (+/-145 410). 53% of the population is female and 47% are male. Thirty-two percent of the population is below the age of 15 years, 64% are in the 16 to 65 year age group and just 4% are over the age of 65 (Local Government in South Africa 2004-2006, 2006: 632-635 and BESG, 2003: 7).

The Msunduzi Municipality is more or less trapped in the dilemma of while undertaking socio-economic development to also be cautious of and protect the environment. One of the possible options (to be discussed in greater detail in the following chapters) to address this problem is that which is offered by the World Bank Environmental Division (World Bank, 2000) which argues that regulating environmental degradation should be undertaken through cooperation and partnership in environmental policy management while ensuring congruency between environmental management and national economic policies by cooperation between economic reformers and environmentalists.

1.5 The main question that this study tries to answer

When it comes to environmental management in the South African context, the government is both the service provider and also plays a stewardship role over the environment. The national Department of Environmental Affairs and Tourism (DEAT) as well as the KwaZulu-Natal Provincial Departments of Agriculture, Environmental Affairs and Rural Development (KZN-DAEARD) are the principal entities in relation to KwaZulu-Natal. In this regard, the government plays the role of ensuring that human interaction with the environment is always in compliance with environmental management legislation. However, this task is not an easy one for the government to undertake alone given different limitations and incapacity to successfully and effectively implement environmental policies due to the scarcity of financial, skills and human resources. It is for these reasons therefore that this study argues that through policy networks which are achieved through collaboration and partnership between state environmental managers, businesses as well as civil society, more effective environmental management can be achieved. Policy networks are appropriate because they allow policy managers, especially the state environmental managers, to be able to mobilize resources that are required for policy implementation in a situation where these resources are widely dispersed across public and private actors and sometimes within civil society organizations (Borzel, 1997: 5).

1.6 Research methods

All information required by this study was collected and gathered through interaction with relevant officials from a range of environmental stakeholders in and around the Msunduzi Municipality area, which included local government officials, industries represented by Pietermaritzburg Chamber of Business (PCB) (including observations from attending Air Quality and Environmental Management Forums), and also from engaging with some of the environmental social movements in the local area.

1.7 Outline of the study

The following chapter will undertake an analysis of the present environmental policy framework in South Africa. This investigation is pursued with the objective of interrogating different legislation that exists and give provisions for environmental management. This is done through an investigation of different policy documents with the aim of discovering what implications these policy documents and legislation have for environmental management for both South Africa and the Msunduzi Local Municipality. It also aims to look at what does the Municipality do with regards to environmental management.

Chapter Three will undertake an investigation into the Pietermaritzburg Chamber of Business (PCB) which was identified as the case study for being one of the existing business networks in Pietermaritzburg and Msunduzi Municipality. With the preexisting assumption that one of the culprits of environmental crimes is usually businesses and industries, the PCB is identified as one of the bodies which harbors and work for the interests of businesses and industries. An analysis in this regard will then be made with an aim of finding out as to what relationship this organization has with the Msunduzi Municipality in as far as environmental management is concerned; and what different businesses within the PCB do with regard to environmental management. Such an investigation is also undertaken with the intention to establish as to what influence and implication do such interactions and relationships that exist have on environmental policy management and implementation.

Chapter Four will then introduce and argue that one of the approaches and a model which is becoming more and more popular with public policy management and implementation in

public administration is policy network analysis. Having discovered that among attributes and causes of failure of environmental policy implementation is the lack of capacity, this study then proposes collaboration and partnership as one form of remedy for these policy ills. This theoretical framework will be arguing by exploring different policy debates. One such view which is advocated by such policy scholars as O'Toole Jr, Hanf and Hupe (1997) is that in modern public management, administration and governance there is no agent of the state which on its own can enact, let alone achieve, policy objectives, but policy intentions are achieved through the concerted efforts of different stakeholders, that is government, civil society organizations and business and private organizations. The argument that will be made is that through partnership and collaboration these actors are able to achieve desired policy objectives in a period which is highly characterized by resources scarcity, and where resources required by policy implementation are widely dispersed across both public and private policy actors. Policy networks in this case are considered to be a new policy tool that is more appropriate in allowing government as an agent that has a formal mandate to protect the environment for the present and future generations, to mobilize these resources to achieve policy goals.

The concluding chapter will then make some concluding remarks about the implications of the whole investigation for environmental policy implementation in the Msunduzi Municipality.

CHAPTER TWO
ENVIRONMENTAL POLICY FRAMEWORK
What does the Msunduzi Local Municipality do with regards to environmental management?

2.1 Introduction

This chapter is mainly aimed at exploration and analysis of the existing and fundamental South African environmental framework. Central to the environmental framework, this paper will focus on the provisions of different environmental legislation in South Africa. The aim is to examine these documents and various policies that exist in South Africa to see as to what implications they have for environmental management as well as trace to what extent they provide for partnership between government and civil society in environmental management. This exploration will then look at the inter-organizational relationship that exists between and among different spheres of government in South Africa as far as public policy and public management are concerned. This argument will then be narrowed down to the context of Msunduzi Local Municipality to investigate and see what plans and activities or initiatives they have for environmental management as well as to see if those plans are implementable.

2.2 Defining environmental management

Firstly, in defining environmental management, there are two important ways in which the environment is being managed. On the one hand environmental management can be thought of as a multi-layered process in which different types of environmental managers interact with the environment and with each other to pursue a livelihood. On the other hand, it can be understood as a field of study characterized by a set of concepts and approaches that interrelate in a distinctive way. And the latter puts more emphasis on the need for interdisciplinary understanding of human-environment interaction (Wilson and Bryant, 1997:5-6). Expanding on these definitions, Wilson and Bryant (1997:5-6) continue to explain that “one of these views sees the environment as a means of allocating and conserving environmental resources, whereas the other emphasizes the management as a very structured process that begins with goal setting and extends through the functions of information systems, research, planning, development, regulation and financing”. Bringing these two strands together, these scholars define environmental management as:

a creation of man and it centers on the activities of man and the relationship to the physical environment and the affected biological system. The essence of environmental management is that, through a systematic analysis, understanding and control, it allows man to continue to evolve his technology without profoundly altering natural ecosystem (Wilson and Bryant, 1997:5-6).

What appears to be of significance in this definition is that these approaches to environmental management are not contradictory, but instead, they complement each other. They complement each other in a sense that in order for environmental managers to be able to manage environment sustainably, they require information, planning, development, regulation and financing.

2.3 Choosing between environmental conservation and development

On the basis of the dilemma of choosing between the conservation of environment and human development, Tlali (2004: 19-20) argues for three different ways that can integrate these conflicting values. Firstly, he argues that one places economic growth and related values at the centre of sustainable development, and in this model, an *economic growth-centred model*, it is economic growth that is important, and in cases of conflict between various values, economic growth is, almost invariably, victorious. A second approach, the *ecology-centred model*, places ecology at the centre. Thus in cases of conflicts between environment and development, ecology is favoured. The third model, *the human needs-centred model*, it is the needs of humanity that are at the centre. However, what Tlali highlights is that none of these models necessarily excludes the relevance of the central values represented in the other models. Thus what is promoted by sustainable development advocacy is an integrated approach which will promote all these values (Tlali, 2004: 19-20). It is based on these approaches, therefore, that the Bruntland Report argued that while socio-economic development, such as urbanization and industrialization, is important for the survival of humanity, at the same time development practices should be accompanied by environmentally responsible practices. It further argued that in order for development practices to be responsible they should be grounded on responsible development and environmental policies for them to successfully meet the requirements of Bruntland Commission and sustainable development (WCED, 1987: and Tlali, 2004: 20-21). Also

based on this argument, the implication is that the present generation owes a duty to future generations to leave the environment in no worse condition than they may find it, that although human needs should be given priority, at the same time environmental, economic needs and social needs must be integrated.

2.4 South African context

South Africa's reintegration into the global economy, the international community and southern African political arena necessitated an improved environmental management system. The country's economic and industrial policy has also turned towards export promotion as a pillar of South Africa's economic development. South Africa, therefore, has a growing obligations to meet international commitments and to be a globally environmentally responsible country. The government then committed itself accordingly to promote an integrated approach to environmental management as a key factor in achieving sustainable development, by ensuring that:

- South Africa meets all its international environmental obligations as rapidly as possible. These objectives are to be achieved through the following practices:
 - ✓ exporters are assisted in meeting internationally expected standards of environmental management;
 - ✓ international pollution control efforts are not used as unfair trade barriers against South Africa's exports, and
 - ✓ South Africa's pollution and waste management interests are adequately represented in international forums.

In addition, South Africa also committed itself to international obligations and agreements on environmental management. Some of the international treaties to which South Africa is a member partly relate specifically to the pollution of water, air and land environments; others are of a cross-cutting nature and impact on all three environmental media. The obligations imposed under these international protocols and their implications for integrated pollution and waste management include treaties and conventions that prevent pollution of water (rivers, oceans and seas), and land and air (White Paper on Integrated Pollution and Waste Management for South Africa, 2000). It is for these reasons as well as its constitutional obligations therefore, that South Africa should pursue its environmental management sustainably.

Now the problem starts with challenges that are faced by the developing world to fulfill and marry environmental, economic and social needs. One of the challenges that is facing especially developing economies and particularly South Africa is a lack of capacity which manifests itself in a form of resources scarcity, which therefore, reaffirms the need for additional financial resources and assistance through partnerships between governments, civil society organizations and private businesses. For example, such resources scarcity in South Africa is manifested among , “the concern that Environmental Management Co-operative Agreements (EMCAs) could not be introduced in South African environmental management due to the lack of necessary legal infrastructure, and also relating to the issue of absence of effective national ambient air quality standards” (Scholtz, 2004:37). (EMCAs are discussed in more detail later in this chapter).

Another challenge that South Africa faces is resources scarcity in relation to public participation. Hamann (2003: 23) explains that “the linkage between policy arenas in South Africa has presented serious challenges. These policies, situated in various laws and policies, and implemented by a range of government agencies, often fail to support each other and, at times, even compete with each other”. He continues to argue that “one of the reasons for this is that government capacity to implement policy has been hampered in many cases by budget cuts and the erosion of human capital” (Hamann, (2003: 23).

Over and above these challenges, however, environmental management advocates call for a collaborative environmental management approach. The argument is that these partnerships have the potential to assist in identifying, analyzing, monitoring, preventing and managing environmental problems in accordance with national development plans, priorities and objectives. Governments should involve non-governmental organizations (NGOs), industries and the scientific community more fully in national developmental activities to support efforts towards sustainable development through collaboration and partnerships. These are different stakeholders whom Wilson and Bryant (1997: 10) refer to as direct and indirect state and non-state environmental managers, suggesting that environmental management encompasses practices and interaction of both.

But Wilson and Bryant (1997: 126) argue that in as far as environmental policy-making is concerned, the role of the state remains central. The distinctiveness of the state's policy-making role is that it holds formal responsibility for the promotion of common good within a national territory, and that it has a formal monopoly on the means of coercion within such a territory to fulfill that function. On the other hand, although lacking the state's coercive powers and mandate, non-state environmental managers develop their own environmental management policies that provide the framework for their environmental management practices.

2.5 The role of Non-Governmental Organizations (NGOs)

In many cases the policy-making role of environmental NGOs is indirect, in the sense that their policies aim to persuade other environmental managers, both public and private businesses and industries, to implement sustainable environmental practices (Wilson and Bryant, 1997: 126-133). They publish policy statements designed to persuade state, businesses, community groups and even environmental users to modify their behaviour in line with sustainable environmental principles. For example, one such environmental NGO is GroundWork which is situated in Pietermaritzburg (Msunduzi Local Municipality). This organization, in collaboration with its counterparts nationwide, is able to target campaigns through the media to increase political pressure on influential environmental managers who are reluctant to comply with environmental regulations requirements. In addition, through high profile campaigns and published documentary evidence, environmental NGOs articulate environmental policies which they believe are in collective interests of humanity as a whole (Hallowes and Butler, 2003, GroundWork, 2007:1-4, Hallowes and Munnik 2007 and GroundWork, 2008). It is for these reasons, therefore, that Wilson and Bryant (1997: 133-134) argue that no environmental manager is in a position to act in isolation from other environmental managers. The development of environmental policies therefore needs to be in the context of multi-layered environmental management. And to some extent, managers should acknowledge these independencies in modifying their policies in anticipation of policies of others. This argument is, therefore, in line with the motion that sustainable environmental management can only be achieved through collaboration between the state, industries and civil society.

Effective environmental management can be achieved through the creation and utilization of existing relationships between government, civil society organizations, businesses or industries (non-state environmental managers), and if public policies are shaped by collaboration and partnerships, policy implementation and compliance is often made easier and is more accepted, which often leads to self-regulation. This lessens the onus on government to physically enforce legislation which is difficult where governments lack the capacity to do this. This might also facilitate and encourage the compliance of those stakeholders, such as certain industries, to environmental regulations because they will always be part of both environmental policy design and implementation.

Seeing that one of the challenges that has confronted environmental management policies in most developing countries and particularly in South Africa is a lack of cooperation within and among government institutions, community organizations and businesses, how can this be overcome? The failure to collaborate therefore raises not only the question of policy design as being highly exclusive of relevant stakeholders, but that they also lack both coordination as well as control of activities among implementing agencies and policy actors (Zuma, 2002: 51-55). As far as cooperation and coordination are concerned, this raises the question as to who accounts to whom in terms of policy implementation if there is no clear line of communication and relationship between and among relevant departments and stakeholders.

In a country such as South Africa these failures indicate that some government agencies are in fact not managing the environment appropriately and thus not ensuring people's environmental rights as mandated by legislation such as the South African Constitution (Act 108 of 1996), the Air Quality Act, (Act 39 of 2004) and the National Environmental Management Act, (Act 106 of 1998). For the purpose of this discussion, it is then imperative to draw attention to the nature of existing environmental legislation in South Africa, and to interrogate these policy documents to find out what implications they have for environmental management and collaborative efforts among different environmental stakeholders.

2.6 South African Environmental Management Legislation:

2.6.1 Environmental Policy Framework in South Africa

One of the most cited principles of modern public policy making which is closely linked to collaboration and management through partnerships is cooperative governance. Environmental legislation, in South Africa, such as NEMA (the National Environment Management Act, Act 107 of 1998) which is the broad framework for environmental policies in South Africa, as well as The Air Quality (Act 39 of 2004), and Local Agenda 21 emphasize the need for co-operative environmental governance. It requires policies “to establish principles for decision-making on matters affecting the environment, institutions that will promote cooperative governance and procedures for coordinating environmental functions exercised by organs of state; and to provide for matters connected therewith” (NEMA, Section 2(2)).

2.6.2 The Constitution of the Republic of South Africa

The South African environmental management framework emanates from the Constitution of the Republic of South African (Act 108 of 1996). Section 24 (Bill of Rights) of this legislation which is the supreme law governing all legislation in South Africa, gives the following provisions as far as environmental management is concerned:

It gives every citizen of South Africa rights:

- (a) To an environment that is not harmful to their health or well-being; and
- (b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-
 - (i) Prevent pollution and ecological degradation; (ii) Promote conservation; and
 - (iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development, (Constitution of the Republic of South African (Act 108 of 1996 Section 24)).

2.6.3 National Legislation

More specific to environmental management is NEMA which is a broad framework on which South African environmental legislation is based. The purpose of NEMA is “to regulate all the activities that impact on the environment” (Barnard, 1999:11). More than ascription to the National Constitution, NEMA further aligns South African environmental

management practices with international agreements on environmental management (NEMA, Section 25 (1)). NEMA promotes cooperative governance of the environment through such provisions as Section 2 (4) (f) which provides for involvement of all interested and affected parties in environmental governance. It also provides all people with the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation as well as participation by vulnerable and disadvantaged persons to environmental management activities (NEMA, Act 106 of 1998).

Both the Constitution and NEMA provide that all South Africans will be effected by the national effort to achieve sustainable development. The partnership of every South African through all levels of government, businesses, industries, workers unions and the community is therefore central to developing a sustainable environmental management system in South Africa. Such legislation also highlighted that the effectiveness of governance structures on the management of the environment depends on the capacity of civil society to work cooperatively with government. It argued that government must initiate the creation of structures to foster stakeholder participation in defining environmental problems and seeking solutions. This will require an ongoing commitment to capacity building both within and outside the government structures. The direct involvement of all stakeholders in environmental governance will allow and give it greater legitimacy and acceptance by society as a whole.

In addition, another more specific example of legislation which emanates from the Constitution and NEMA is the Air Quality Act (Act 39 of 2004). Sections (56) and (57) of this legislation provide for the need for a consultative process between all relevant government spheres and organisations as well as with different stakeholders, be they public, civil society, NGOs and/or private businesses on matters pertaining to environmental management particularly air quality. What is similar among all these policies is that they encourage the participation and involvement of different stakeholders and interdependence in the decision-making process whenever there is a possibility of an environmental impact, either negative or positive, as being caused by human activities, especially emissions from industries. There is also an emphasis on cooperation on environmental management matters generally.

Section 35 of NEMA further provides for the Minister of Environmental Affairs and every Member of the Executive Committee (MEC) or municipality to enter into an Environmental Management Co-operation Agreement (EMCA). The development and implementation of EMCAs aim to promote co-operative and participatory governance which is also reflected in the wording of Section 35(2) of NEMA. This provision does not only relate to co-operative governance between organs of state, but also extends to co-operation and participation of civil society in general (NEMA, Act 106 of 1998, DEAT, 2000:10 and Scholtz, 1994: 183-184). This interaction between different stakeholders is to be achieved through agreements (EMCAs), entailing collaboration and partnership between both state and non-state environmental managers. One of the ways through which such agreements and working relationship can be achieved is through EMCA which is “a co-regulatory instrument, whereby an interactive relationship between the regulator (the state) and the regulated is established to improve the environmental performance of regulated beyond or in compliance with legal requirements” (DEAT, 2000: 10). “One of the approaches which are adopted by the EMCAs is a negotiated environmental agreement. This is a contractual agreement between the public authorities (national, provincial or local) and industry and/or communities. These contracts usually contain targets and timeframes to achieve these targets. Another mechanism that is pursued in the EMCA is public voluntary programmes whereby participating companies agree to comply with the requirement of rules, guidelines or standards (related to their performance technology or management) developed by public authorities” (DEAT, 2000:10).

Having passed such legislation as NEMA, the Air Quality Act and other related legislation which mandate the state to collaborate with different sectors (non-state actor), environmental management in South Africa has now become a responsibility which has been distributed across all three spheres of government (national, provincial and local) through decentralisation. The implications and significance that such decentralisation has for environmental management is that power no longer solely lies with the national government. Instead both provincial and local governments are now able to decide on approaches that they choose to manage their policies. This has, however, added more responsibilities to local governments who already bear the burden of creating local economic development initiatives. Over and above that, “operating under conditions of

limited resources as caused by budget cuts and erosion of human capital” (Harman, 2003: 23), local governments are then faced with the responsibility of ensuring compliance with the pressure of sustainable development. It is for these reasons, therefore, that if local governments are to achieve and perform these roles and perform them efficiently and successfully, by implication one of the available options is to pursue collaboration and partnership with different environmental stakeholders, especially with businesses and civil society organisations and to establish as well as strengthen its inter-organisational relations. Based on the needs for collaboration and partnership, as well as on the mandate that local government have with regards to environmental management, Local Agenda 21 has thus been adopted as a tool for effective and inclusive environmental management. For the purpose of this study, it is then necessary to briefly interrogate how the environment is managed by the Msunduzi Municipality especially by their Local Agenda 21.

2.7 Msunduzi Municipality Local Agenda 21

In its vision statement, the Msunduzi Municipality aims to facilitate the provision of services through community participation, sound governance and sustainable environmental management. As a local authority within UMgungundlovu District Municipality, this municipality is also bound by the principles of sustainable development, and therefore ascribes to Local Agenda 21. “Local Agenda 21” or “LA 21” means an action programme developed to assist local municipalities to achieve sustainable development. It was drafted at the United Nations Earth Summit held in Rio de Janeiro (Brazil) in 1992, and ratified by the leaders of 179 countries whose principles among others are: (a) a multi-sectoral approach, (b) the integration of social, economic and environmental issues, (c) concern for the future, equity, justice and accountability; (d) recognizing and working within ecological limits; (e) developing partnerships with civil society; and (f) linking local issues with global impacts (Msunduzi Municipality Immovable Property Disposal Policy Framework, 2007:4).

This Municipality has, therefore, taken different initiatives in this regard to empower several officials and councillors with knowledge and expertise in environmental matters. A number of them have attended various workshops and courses on the principles and

practice of LA 21. (For example, the chairperson has also attended a workshop in Cape Town and an international conference in Pretoria; and the committee officer is completing MA degree in the field). There has been, too, within the Working Group as well as in the Environment Forum, participation from a wide range of groups and people, and it is noted that among these groups, as indeed among interested councillors, there have been people from all sectors of the community (Msunduzi Municipality IDP, 2002).

In 2005 a LA21 sub-committee was established within the previous Transitional Local Council (TLC). It is at the moment chaired by Councillor GJN Meyer (**See terms of reference: Appendix A and its organisational structure: Appendix B**). This consists of a few councillors, interested officials and representatives of a number of community organizations. This sub-committee, which gradually received some recognition within the life of the Municipality, has had a continuous and fairly lively existence since then. It has also set up an Environment Forum, which brings together an even wider constituency of people concerned about various issues within the environmental spectrum. The present arrangement is that the Environment Forum meets quarterly, and in the intervening period the LA 21 Working Group (as it is now called) meets monthly (Msunduzi Municipality IDP, 2002).

In the process of implementing LA21 the Municipality has been in touch with people and groups many of whom it also interacts with and consults as the Integrated Development Plan (IDP) process unfolds. Among these groups and bodies are the following: the provincial Department of Agriculture and Environment Affairs, GREEN (the Greater Edendale Environmental Network), the Sobantu Environmental Desk, the Environmental Justice Networking Forum, Heritage KZN (Amafa), the University of KwaZulu-Natal's Centre for Environment and Development and its Centre for Government and Policy Studies, the PCCI, various Conservancy Associations, KPCA, Umgeni Water, the Sinethemba Youth Project, the Landfill Site Monitoring Committee, the PMB Youth Council, the SA Botanical Society, Eskom, the Masizisebenze Youth Project, SRK Consulting, the Paswa Farmers Association, Sizanani, JH Landscaping, and the Natal Museum. One should also mention the Air Quality Forum, which brings together municipal

officials, university researchers and representatives of the private sector (Msunduzi Municipality IDP, 2002 and Msunduzi Municipality IDP, 2008-2012).

Among the functions and activities that this committee is responsible for includes:

- a) Environmental Impact Assessments (EIAs) for new housing schemes and road works in terms of Integrated Environmental Management (IEM) of the municipality.
- b) Mapping of wetlands in the Municipal area.
- c) Writing of the Municipality's State of the Environment Report.
- d) Identification and management of Metropolitan Open Space System (MOSS).
- e) To enhance the Municipality's view of heritage and tourism.
- f) Reviewing the Municipality's waste management strategy.
- g) Handling of the Municipality's environmental issues to work towards a situation in which officials from several departments and other stakeholders work together in an integrated way.
- h) Facilitating co-operation between municipal officials and university researchers.
- i) Clean up of streams and watercourses, and resurrecting such projects as the Camp's Drift waterfront project.
- j) Recognizing conservancies and other environmental and heritage groups.
- k) Supporting The Air Quality Forum, which is largely funded by the private sector.
- l) Facilitating environmental audits, which cover such issues as pollution, degradation, conservation of bio-diversity, environmental hazards, waste management, open spaces, aesthetic considerations, etc.
- m) Facilitation of clearing and eradication of alien invasive plant species.
- n) Inviting the public to participate in environmental management initiatives and encouraging them to bring issues to environmental forum for debates and discussion (Msunduzi Municipality IDP, 2002).

2.8 Capacity of local government for environmental management

In a study on local government capacity which was conducted by Nel (2002:22-36) and Heydenreich & Barlow-Weilbach (2003:6) several institutional and capacity challenges that are impacting negatively on the implementation of environmental management at local government level were identified. It should also be noted that these are challenges which affect most if not all local governments in South Africa:

- a) The fragmentation of environmental management functions into various departments and competencies which complicates an integrated approach to environmental management. This goes hand in hand with a lack of human resources. The negative impacts of this fragmentation are exacerbated by unclear planning and operational responsibilities. This all culminates in inappropriate structures and organizational arrangements (Appelgren & Klohn, 1999 quoted in Heydenreich, 2005:21).
- b) One of the main causes of environmental degradation in urban areas is seen as the lack of public awareness of these problems and low participation in efforts to improve the urban environment. Politicians are more concerned with implementing projects in support of populist vote gathering than in considering the potential sustainability of such projects in the longer term. Although politicians are generally happy to endorse environmental policy, this endorsement is not forthcoming when the policy needs to be implemented, especially if it is perceived that it could impact negatively on politically favored projects (Appelgren & Klohn, (1999) quoted in Heydenreich, 2005:21).
- c) Environmental management is not being considered a priority especially due to the high rate of unemployment, the prevalence of poverty and the lack of access to basic services. Political leaders often focus on immediate and highly visible problems, leading to short-term solutions and are inclined to hold back on meeting recurrent costs of maintaining local infrastructure or the investments needed to control environmental spill-over effects that extend beyond political and geographical boundaries (Appelgren & Klohn, 1999 quoted in Heydenreich, 2005:21).

- d) The very broad focus of environmental management and the variety of challenges that this poses to local authorities, requires integrated and holistic cross-sectoral planning and management strategies. These are largely absent from the present local authority strategies and hamper the successful implementation of environmental management (Appelgren & Klohn, 1999 quoted in Heydenreich, 2005:21).
- e) The general dominance of the national or regional political agenda at local authority levels often inhibits attention given to local environmental management issues.
- f) There is inadequate information available regarding environmental management. The absence of relevant environmental information and information on management systems poses significant barriers to effective environmental management in most local authorities (Appelgren & Klohn, 1999 quoted in Heydenreich, 2005:21).
- g) There is inadequate perception of the scope of environmental management. The general lack of understanding as to what sustainable development means for local government limits both the priority and resources allocated to this function. This is further exacerbated by the fact that the relationship between environmental management in its broadest sense and the objective of sustainability is often not fully understood by councillors and officials alike. This results in ineffective policies and strategies (Steinberg & Miranda, 2005 quoted in Heydenreich, 2005:21).
- h) Urban areas often lack adequate environmentally sound infrastructural technologies and services to address environmental challenges.
- i) Municipal governments lack the institutional capacity to carry out effective environmental planning and management to routinely provide effective urban services. Municipalities often lack effective, participative and transparent governance, which are imperatives for successful environmental management approaches. Although the need for participative and transparent governance is being addressed within South Africa through the IDP process, environmental management issues are largely absent from this process.
- j) Education and training of staff at all levels usually does not cover issues of sustainability. Although various financial resources, including technical assistance

from the DBSA, external to local government for environmental capacity building exist, the actual utilization of such resources is slow and time-consuming. The lack of human resources and appropriate institutional arrangements impact negatively on local government's ability to absorb projects on this issue and often lead to limited results being achieved (Nel, 2002 quoted in Heydenreich, 2005:20).

The challenges posed by institutional and capacity concerns need to be considered before the transition towards a sustainable future is embarked on (Nel, 2002 quoted in Heydenreich, 2005:20). The main question that arises is what then needs to be done. It then becomes imperative for everyone involved to start to explore different options that are available, based on the composition of the membership of the Municipality's LA21, and the variety of stakeholders and role-players that already exist. It is maybe time to explore such options as strengthening relationship, partnership and collaboration with businesses. Given what the municipality does, how can the PCB contribute and assist in the implementation of environmental management policy?

2.9 Intergovernmental Relations in South Africa

Whilst some progress has been made in forging co-operation between national and provincial governments, the integration of the activities of local governments with other spheres of government has been limited and uneven. Thus, in some sectors where concurrent responsibilities transverse all three spheres of government, national policy is not being implemented at the local level, or else is implemented in a partial manner (Hamann, 2004:23). The establishment of the South African Local Government Association (SALGA) in 1996 was an attempt to provide a voice for organized local governments at provincial and national levels, has yet to have a significant impact on national policy making (Tapscott, 2000:25). For environmental management, this might imply that if concerned spheres such as local government, provincial government and national government are not integrated as they should be, policy implementation is still far from being complete, let alone achieving its intended objectives.

Though this is the context that reflects the whole of South African context with regards to inter-organizational relations, this is also the case particularly with the Msunduzi

Municipality. This Municipality operates within the UMgungundlovu District Municipality, which in turn reports to either the Province of KwaZulu-Natal or to the national government, depending on the nature of jurisdiction. With regards to the nature of the relationship that exists between the district and local (Msunduzi Municipality), there is in actual fact very little interaction that exists with regards to environmental management and environmental policy implementation. (This point will be dealt with in more detail in the next two chapters). With regards to different challenges that this Municipality is facing, like other municipalities in South Africa, Msunduzi Municipality is also suffering from scarce resources; financial resources, human capital and even equipment that are supposed to be used to perform day to day activities (DAEA, 2008).

It is for these reasons, therefore, that this study argues that one of the approaches that can enhance municipal performance in environmental management is engaging through collaboration and partnership with private businesses and industries as well as civil society organizations by means of policy networks. The chapter that follows presents the Pietermaritzburg Chamber of Business (PCB) as one of the existing networks in Pietermaritzburg and Msunduzi Municipality. The aim is to investigate different environmental elements within the PCB and what effects and implications they do or can have for environmental policy implementation for the Msunduzi Municipality.

CHAPTER THREE

THE PIETERMARITZBURG CHAMBER OF BUSINESS (PCB)

What do businesses do with regards to environmental management?

3.1 Introduction

In their debate for effective policy implementation, policy scholars such as Klijn (1997:23-24), Brinkerhoff and Crosby (2002), as well as Borzel (1997:4-6) argue that what is most important in contemporary public policy is the existence of partnership, collaboration and cooperation among policy actors in defining policy problems, as well as partnership and cooperation in designing measures and interventions to deal with that particular policy problem that has been identified. What is further highlighted by Brinkerhoff and Brinkerhoff's (2001:168) public policy debate is "cross-sectoral collaborations whose purpose is to achieve convergent objectives through the combined efforts of both sets of actors, but where the respective roles and responsibilities of the actors involved remain distinct".

The main aim of this chapter is to examine partnerships with the Msunduzi Municipality that can be formed in the design and implementation of environmental policy. One such partnership is collaboration between Pietermaritzburg Chamber of Business (PCB) and Msunduzi Local Municipality. The PCB is an umbrella body that represents significant businesses and industries in and around Pietermaritzburg. It is the main industrial network in the Pietermaritzburg and Msunduzi area, and also important because industries are in most instances regarded as the main culprits in environmental crimes.

This chapter aims to map the structure, functions and the nature of this organization and the nature of relationships that exist between and among its members (businesses and industries) and its partners. It also aims to investigate if there are any activities that this organization is involved in with regards to environmental policy management. Over and above that, this chapter will trace the nature of relationship or partnerships that exist between the PCB and Msunduzi Municipality with regards to environmental management, as well as to what extent this relationship, if it exists, can be employed to enhance the management of environmental policy.

3.2 What is the nature of PCB? Its membership and objectives.

The PCB is an association of different businesses and industries in and around Pietermaritzburg. “It is a successor to quite a long line of Chambers”, explains Andrew Layman (Interview, 07 October 2008). The first Chamber of Commerce was formed in 1985 in Pietermaritzburg. A little after that the Chamber of Industries was established, and in the early 1990s the Chamber of Commerce and the Chamber of Industries combined to produce the Chamber of Commerce and Industries. The PCB is a voluntary group of business enterprises that came into existence in August 2002 after the amalgamation of the Midlands Black Business Chamber, the Pietermaritzburg Sakekamer and the Pietermaritzburg Chamber of Commerce & Industries. The PCB has about 700 members; businesses, industries and consultants in different fields (**See Appendix D for a list of PCB’s members, their profile and activities**). It is registered as an association incorporated under Section 21 of the Companies Act and is also a registered Non-Profit Organization (NPO). The Board of Directors in the PCB is made up of twelve directors who are also heads of different companies which are members of the PCB with Mr. Andrew Layman heading the organization as a Chief Executive Officer (CEO) (<http://www.pcb.org.za>) (**See Appendix C**). Their membership is not only limited to Pietermaritzburg. Layman also mentioned that they also have members in Durban. “But they are companies that want to get into the Pietermaritzburg market. So they see benefits in being part of PMB network. So, we have members from Kloof, Hillcrest, Durban, and Howick, we also have got one in Pretoria” explained Mr. Layman (Interview, 07 October 2008) (**See appendix D**).

Membership of the PCB is not an entitlement and the authority to admit eligible members and to terminate their membership in terms of the Articles of Association and the PCB’s Constitution resides with the Management Board. Members may be companies, sole proprietors or individuals, though individuals are few. Any companies, businesses, individuals who are in business and cooperatives are allowed to join the PCB, paying the subscription fee of about R1000 annually. In the case of a company, any person who is an employee of that company and who is in any way involved in PCB activities or affairs is considered to be a representative of the company and the PCB. (<http://www.pcb.org.za/default.asp?id=966>).

3.3 Principal objectives of the PCB

The PCB has set itself different goals and objectives and it is assumed that these are shared by any company or person seeking admission as a member. In line with the KwaZulu-Natal Provincial Department of Economic Development, Trade and Investment (TIKZN) and South African Chamber of Commerce and Industries (SACCI) these are some of the objectives which this business network strives to achieve:

- a) The promotion and support of local business with an overall objective of eradicating unemployment through employment creation in and around Pietermaritzburg and Msunduzi area. To facilitate local economic growth and development, the PCB puts effort into supporting locals into businesses with business related information and advices through different annual events that are held at the PCB Chamber House such as different networking meetings, different economic development forums;
- b) The development of the city (Pietermaritzburg) and surroundings as a prime locality for investment. This objective is necessarily achieved through partnership with economic development unit of the municipality and such government departments as the Department of Trade and Industries (DTI);
- c) The development of the city and surroundings as a destination of choice for tourists. One of the initiatives which are central to the achievement of this objective is the Air Quality and Environmental Management Forum (AQEMF) which takes place after every two months. With regards to destination of choice for tourists, AQEMF is aimed at achieving safe and clean environment which is also conducive and serves as tourists' attraction. One of the departments which are considered as important and a key partner in this regard is the KwaZulu-Natal Provincial Department of Tourism Affairs;
- d) The promotion of best practice in business through capacitating PCB members on compliance with legislation governing business, taxes, labour, environment, health and safety or any other law or regulation governing the conduct of business;
- e) The promotion of entrepreneurial enterprise and small business, in particular. This is also one of the objectives which is linked to local economic growth and development aimed at eradicating such issues as poverty and unemployment, and

- which is facilitated through such initiatives as Local Economic Development Forums and creating business networks using different annual events which are held at the PCB Chamber House;
- f) The facilitation of Black Economic Empowerment (BEE) by providing relevant business services, guidance and information to business entrepreneurs through workshops, consultations and other forms of initiatives that are designed for such purpose;
 - g) The PCB in having membership of such business bodies as Trade and Investment KwaZulu-Natal (TIKZN) and South African Chamber of Commerce and Industries, aims to achieve the effective representation of the views of businesses through involvement in business policies both locally and internationally; and through the establishment of a vibrant business network and maintenance of constructive partnerships both locally and internationally with governments, other business bodies and financial institutions;
 - h) The preservation and furtherance of the interests of Chamber members; and
 - i) The financial sustainability and improvement of the Chamber.

“It is thus expected that members of the PCB should conduct themselves in such a way as to aspire to the corporate achievement of these objectives; the natural spirit of business competition between members should not undermine the collegial spirit which binds the membership of the PCB in a constructive business network. Members are expected to respect and re-enforce by their actions and words the reputation of the PCB as a credible business organisation to which they have chosen to belong” (<http://www.pcb.org.za/default.asp?id=898>).

3.4 How is the PCB involved in environmental management?

3.4.1 The Air Quality and Environmental Management Forum

Apart from formal business interactions and networking, the PCB is also engaged in informal networking and partnership initiatives with different government departments, research organizations and civil society organizations. Most of these partnerships are encouraged and facilitated by different forums which are also initiated by the PCB itself. Preliminary research has further revealed that more than being a network that interacts and deals with business or industrial interests in the Msunduzi Municipality, the PCB is

further involved in environmental management initiatives. One of these initiatives includes the establishment of the Air Quality and Environment Forum (which is chaired by Mr. Kid Strachan who is also a member of the Msunduzi Local Municipality's LA21 Committee) as well as a Local Economic Development Forum which meets every second month. These forums are attended by PCB members, government officials from provincial and local government, academics, as well as non-governmental organizations (such as Groundwork, GREEN, the Sobantu Environment Desk and other civil society organizations and formations). The PCB's website and local newspapers are used to publicize these forums. With regards to the Air Quality and Environmental Management Forum, everyone who has an interest in environmental management issues is welcome and encouraged to attend and contribute to the discussions and debates. These forums constitute informal networking and partnership which does not require any formal membership as a pre-requirement for participation.

With regards to Air Quality and Environmental Management Forum, different issues are discussed in relation to industrial or business practices and their impact on the environment. In these forums different officials from both government and independent community organizations make different presentations on environmental management issues. For example, the first forum in 2008 was held on the 11th February and the second on the 14th April, both in the headquarters of the PCB (Chamber House, in Royal Showground, Pietermaritzburg). In these forums individuals who made presentation included Professor Michael Kidd from the University of KwaZulu-Natal, Faculty of Law and Andrew Simpson (former UKZN lecturer, School of Geography & Environmental Management). One municipal environmental management division official, and NGOs such as GroundWork attended these forums.

From my observation of the Air Quality and Environmental Management Forum which was held on the 8th August 2008, different presentations were delivered by the guest speaker for the KwaZulu-Natal Provincial Department of Agriculture and Environmental Affairs (DAEA) as well as Simpson Raider and Associates which is an independent air quality and environmental agency or consultant based in Pietermaritzburg. This substantiates the notion that the PCB at the moment is a platform which is used by

different environmental stakeholders, particularly government agencies and businesses, to debate environmental issues which might be central to environmental policy implementation in Msunduzi Municipality. This interaction appeared to be very important and suggests potential for effective environmental policy management.

However, the PCB's networking and partnership at this point in time has not yet had any influence on environmental policy-making either in the Msunduzi Municipality or with UMgungundlovu District Municipality. Both Andrew Layman and Andrew Muir made it clear that while the PCB has an environmental forum which meet on a fairly regular basis (about every six weeks), where they try to educate their members, they emphasized that the Chamber is not a law enforcer, because if the PCB starts judging its members, holding them responsible for environmental crimes, then they will lose members (Interview, 07 October 2008 and Interview, 23 June 2008). Layman explained that "I would say apart from trying to educate our businesses in good business practice, there is nothing we can do with regards to their environmental practices and environmental crimes. People become quite shocked if I say this as if the Chamber should say to members, you are not complying with the environmental standards and we don't want you in the membership anymore. But it's really impossible to do that, unless you've got proof that they've really done something wrong".

Layman further admitted that because of shortage of expertise, the PCB is not as active in educating their members as they might want to be, and the reason for that is that they don't have the capacity to afford an expert on environmental matters. He mentioned that "if we want to guide members on issues of compliance with environmental regulations we actually need to have somebody within the Chamber who can be an advisor on environmental issues, someone who is available to all businesses. But we cannot afford that. Well I'm not an expert, I can't even write environmental articles. But we hold seminars from time to time; we've had several over the years that dealt with what environmental laws require on our business and so on, with the help of environmental experts from outside the PCB. But importantly, the forum is quite useful for discussion of environmental issues and so on. But I think the situation is not at all hopeless at this

moment, there is a noticeable improvement among our members with regards to compliance with environmental regulations” (Interview, 07 October 2008).

So, apart from the environmental forums, both Mr. Layman and Mr. Muir maintained that at the PCB no formal interaction whatsoever with both municipalities (UMgungundlovu and Msunduzi) with regards to environmental policy management exists. From these conversations and interviews it emerged that so far these environmental forums and partnerships have not yet had any influence on the Municipality’s environmental management policy.

3.5 What do the various companies do in relation to environmental management?

Although the PCB can do little to compel or induce businesses and industries to adhere to required environmental management practices, some progress has already been achieved by a number of companies themselves. Through knowledge gained from such initiatives as Air Quality Forums and other platforms in which environmental issues are discussed, different businesses and industries have managed to devise various environmental management strategies (**See Appendix D**). Most industries and businesses have established designated environmental management posts for pollution and waste management, occupational health and safety. (**See Appendix D for a list of such posts in companies affiliated to the PCB**). They have also introduced emergency and evacuation procedures as well as different signages which encourage environmental practices that are in line with environmental legislation.

Through these environmental initiatives and posts, companies are now more aware of such practices as waste classification. For example, most industries have started to classify their waste into general, toxic, hazardous and other classes of waste as per the requirements of the National Waste Act (Act No 59 of 2008). Industries have become able to differentiate which waste should be disposed of in which waste disposal site (landfill site). Most companies have also been able to come to terms with different requirements pertaining to storage, and the transportation of especially toxic and hazardous waste or material both within and outside their premises.

There are different initiatives through which environmental consciousness is displayed by different industrial groups. Hulamin is one big manufacturing industry in Pietermaritzburg which focuses on manufacturing aluminium products. Its plant is located at Edendale. Hulamin's environmental management programmes concentrate on the following areas:

- a) Air quality management. One of the very important initiatives towards environmental stewardship and consciousness is an air quality monitoring and emission reduction programme which is being implemented. The management and control of air quality is addressed by means of an Air Quality Monitoring and Emission Reduction Plan. Under this system, a source inventory has been established and direct monitoring of the scheduled (listed) and nonscheduled activities are maintained (Hulamin Annual Sustainability Report, 2007:12 and 2008:9).
- b) Waste management through activities such as 'recycling, reuse and reduce' which has been given the acronym of "The Three R's" is an environmental management initiative. This initiative is pursued with the aim of contributing towards the reduction of waste and consumption of natural resources. For example, in 2008, 6429 tons of aluminium were recovered. Hulamin also manages a non-aluminium recycling programme and almost 400 tons of such waste were recycled in 2008, (Hulamin Annual Sustainability Report, 2007:12 and 2008:9). 'Recycling is mainly undertaken at Hulamin with a belief that recycling of metals has environmental, economic and social value' (Hulamin Annual Sustainability Report, 2007:1-2).
- c) Effluent and storm water management is also monitored in order to manage the risk of effluent entering the storm water system.
- d) Energy and natural resources conservation is another environmental consciousness and stewardship programme that has been displayed by some industries. At Hulamin through these initiatives, 'water consumption has been reduced by 29% in 2008, from an average of 5,02 m³/ton in 2007 to 3,55 m³/ton in 2008 (Hulamin Annual Sustainability Report, 2007:11 and 2008:9).

Almost the same progress in the air quality management has also been achieved by Bison Board which has a very high stack emission in Pietermaritzburg. For example, in separate interviews with Rodney Bartholomew and Clive Anthony (Msunduzi Municipality environmental management officials), they explained that “with the Air Quality Forum, Bison Board was brought on board as part of the forum and there were lots of negotiations with them and they responded by importing scrubbing equipments to clean up their smoke emissions before they are released to the atmosphere (Interview, 26 August 2008 and Interview, 06 November 2008).

These are examples of activities and changes of attitude which have been achieved thorough cooperation, negotiations and different forums which involve the PCB. Furthermore, this progress is partly also a result of the participation of such departments as the Department of Agriculture, Environmental Affairs and Rural Development (DAEARD), the national Department of Environmental Affairs and Tourism (DEAT) as well as The Wildlife and Environment Society of South Africa (WESSA) in different discussions and debates which take place at the PCB’s Chamber House.

In addition, companies and industries are required by law to undertake regular environmental audits which are carried out by both external and independent auditors and internal auditors which are done by consultants appointed by industries themselves. These audits allow businesses and industries to be able to learn how far or close they are to complying with environmental regulations.

Moreover, according Mr Layman, “industries and businesses within the PCB usually arrange and organize different environmental management capacity building workshops. This they do themselves on their own without anyone from outside or from the government. These workshops are used to capacitate industries and businesses on compliance with environmental regulations, environmental best practices and to share information and experiences with regards to environmental issues such as waste management, and environmental safety issues. In these workshops environmental experts from environmental consultants and groups such as SSI Engineers & Environmental Consultants, WSP Environmental (PTY) Ltd, Enviroscope and others that are also

affiliated within the PCB contribute through presentations to capacitate industries on matters pertaining to sustainable environmental practices. Some of these workshops are also facilitated and initiated by the PCB itself, sometimes using Air Quality and Environmental Management Forums as a platform” (Interview, 07 October 2009).

To further align themselves with environmental requirements, some businesses and industries have acquired, and some are still in the process of acquiring, latest technologies which allow them to monitor the quality of their emissions as is the case with Hulamin and Bison Board. However, those that have not managed to do so rely on air monitoring that is done at regular intervals by consultants such as Simpson Raider and Associates and other environmental consultants who are also associated with the PCB. So, one can see that there is in fact lots of improvement towards compliance with environmental regulation that is happening within the PCB and among the industries themselves, with some assistance and a little pressure from government authorities and departments.

3.6 How do the various companies, either on their own, or as representatives of the PCB, interact with the Msunduzi Municipality?

As explained earlier, the Air Quality and Environmental Management Forums take place almost every two months. In this forum different stakeholders within the community, from businesses, NGOs, CBOs, environmental consultants, government departments and different civil society organizations participate in debates pertaining to environmental issues. The Air Quality Forum was an attempt developed specifically to bring government authorities together with businesses to address issues of air quality in the city in order to devise some kind of strategy and plans so that industries could be encouraged to deal with their air quality issues. The Municipality and Department of Environmental Affairs and Tourism (DEAT) supported that initiative (Interview, 26 August 2008 and Interview, 06 November 2008). Mr. Bartholomew explained that the Forum was created to get all the parties around one table. For example, there is Duzi-Umngeni Conservation Trust (DUCT) which is working closely with commerce and industries and local authorities to try and resolve water quality issues. One of DUCT’s initiatives is to try to establish a conservancy in the Sobantu-Willowton industrial area which will bring CBOs

and NGOs and residential communities together with industries and authorities to discuss how are they going to resolve environmental issues, and particularly, water quality issues. Through these, some industries which have the highest stack emissions have already moved towards improving their practices (Interview, 26 August 2008 and Interview, 06 November 2008).

All this goes to show that through concerted efforts between and among different stakeholders and particularly businesses and industries and government, effective environmental management can be achieved; industrial compliance with environmental management policy is not an impossible venture after all. Andrew Layman, Rodney Bartholomew and Clive Anthony from both the Municipality and the PCB indicated that at least some progress is being achieved. Both Bartholomew and Anthony explained that “with the Air Quality Forum, Bison Board was brought on board as part of the Forum and there were lots of negotiations with them and they responded by importing very expensive scrubbing equipments to clean up their smoke emissions before they are released to the atmosphere. They spent a lot of money in that (which is an on-going practice) and they are trying to improve” (Interview: 26 August 2008 and Interview: 06 November 2008). This is an achievement for environmental management and for the nature of the relationship between the Municipality and industries. What then remains is whether such initiatives, compliance and kinds of relationship and partnership can be achieved and sustained with all other businesses and industries in the Msunduzi Municipality area.

With regards to how was this progress achieved, Bartholomew explained that, “it was the Municipality within the Forum that said, we require you to do certain things. Your emissions are not within standards. We need you to clean up, and there were negotiations and targets were set. Clearly you cannot expect it to be done overnight. An old industry like that is trying to meet the new standards, they are really trying. There is lots of money involved, but at least they are working towards targets and they are being monitored in terms of air quality” (Interview, 26 August 2008).

Bartholomew continued: “I think that’s the approach that we’ve followed, saying let’s agree on the kinds of standards that we want to meet and time frames which are acceptable to everyone. So, now at least we have got everyone moving in a single direction. We told them that we understand that your new scrubbers are going to cost you about R5million; we can’t expect you to spend R5million in one financial year. You tell us what is acceptable or affordable to you, i.e. 5 years, a million Rand a year, or six or seven years. You negotiate; at least you have targets that you are working towards. Industries will then accept responsibilities for what they are going to do. The Municipality as an authority then said right, we will monitor your phased approach to this. You will have one stack emissions compliance within three years, the second stack will be within the next few years. At least you’ll have targets that you are working towards” (Interview, 26 August 2008).

Furthermore, “through negotiations, industries then accept responsibilities of what they are going to do and as the Municipality you say, as the authority we will monitor. I think those kinds of agreements can be reached, and at the end of the day we will say to the industry that you have to comply. We are accepting that you need time to comply with regulations, but at the end of the day you will have to comply and, to be honest, my personal opinion is that we need to look at the bigger picture and, yes, they may be contributing substantially to the rates of the city and maybe providing a hundreds of jobs, but the health of the entire city is at risk if they do not comply with acceptable environmental standards. Our responsibility as the Municipality then is to say we have to look at the environmental quality and health of the city and we are upholding the Constitution: the Constitution gives every citizen a right to clean and healthy environment. Whilst we assist business to reach the right standards, we have to draw the line somewhere and if they don’t comply we will prosecute them because we have to look at the bigger picture” (Interview, 26 August 2008).

This, then, is the approach which the Municipality as an authority has adopted thus far with regards to air quality and environmental management and dealing with industries in terms of existing environmental management regulations. These achievements show that through negotiations and bargaining, positive results can be achieved; that through

negotiations, different parties are able to achieve policy goals that satisfy all and achieve policy intentions that are desirable, at least to all who are involved.

3.7 PCB's interaction with Msunduzi Municipality and UMgungundlovu District Municipality

The PCB has an improving relationship with the Msunduzi and UMgungundlovu municipalities and numerous business support organisations, including Trade & Investment KwaZulu-Natal (TIKZN) and other national and international support programmes. With regards to the PCB's relationship and interaction with the UMgungundlovu District Municipality, Mr. Layman explained that "for some period they had very little interaction, their relationship went quiet sour with the district for a while, but those relations are improving now" (Interview Andrew Layman, 18 August 2009). He also mentioned that the Msunduzi Municipality is closer to their membership than the District is. He emphasized that in terms of Pietermaritzburg businesses, the District plays a very small role (Interview, 07 October 2009).

After acquiring the status of being the capital city of the province of KwaZulu-Natal in 2004 and the branding of Msunduzi as an investor destination, the relationship between the PCB and Msunduzi Municipality has grown even better. The city has recognized the attributes that make for a great investor region and together with the PCB, is working towards achieving this. "The branding of Msunduzi as a city of choice comes out of the municipality's vision," says Acting Strategic Manager for Economic Development and Growth, David Gengan. "It is a summary of all the things the city wants to be and of all its policies. It shows that Pietermaritzburg is a place where people can do business, raise a family and enjoy a high standard of living" (Msunduzi Municipality Economic & Business Report, 2008: 7).

According to Gengan, there is no doubt that this branding is achieving what it is intended to. The city has come a long way in bringing the perceptions of potential investors, international and domestic, to the view of Msunduzi as a promising economy in which to do business. And most importantly, in as far as business investment attraction is concerned, the Municipality works hand in hand with the PCB and TIKZN. The

economic development shown in the city of late is another indicator of its potential opportunities. For example, the economy has managed to grow at a consistent 8% in the earlier years of this decade, and even though this rate has declined somewhat, growth continues at 5%. Over and above this, the Business Confidence Index for the city for the second quarter of 2006 was 83%. This is a clear sign that businesses are positive and confident about the current and future state of business in Msunduzi (Msunduzi Municipality Economic & Business Report, 2008: 9). Basically, these are among the fruits of partnership and working cooperatively among the Msunduzi Municipality, TIKZN, SACCI and the PCB. What then remains is working towards the sustainability of these partnerships and extending it to other environmental stakeholders in the public and private sectors and civil society. What also remains is to maintain this partnership and cooperation so that it is able to achieve the compliance of businesses and industries with environmental rules and regulations.

3.8 Conclusion

The aim of this chapter was to identify and explore partnerships with the Msunduzi Municipality that can be of importance in managing environmental policy. One such network is the PCB which is an umbrella organization representing businesses and industrial organizations and their interests in and around the Msunduzi Municipality. The chapter outlined the different objectives of this organization, measures of how it interacts with its members as well as how it networks with different sectors of the society through various forums and initiatives that it coordinates, one of them being the Air Quality and Environmental Management Forum. These Forums are very important in forging the business network's partnership with the Msunduzi Municipality and in facilitating environmental forums in which important environmental issues are discussed. But this network has no significant influence in the management of environmental policy in the Msunduzi area, let alone in interacting with the District on such matters. Nor is the PCB in any position to compel their membership to comply with environmental regulations. Nevertheless, through the Air Quality Forum the PCB has made progress in educating their members about the importance of environmental compliance.

As reported, municipal officials indicated that through negotiations, progress is being made in making industries comply with environmental regulations. However, such progress is not initiated through engagement with the PCB, but instead came from negotiations that take place separately with individual industries. This further reveals that though PCB exists as a platform which is appropriate to use in order to engage on environmental management issues, this partnership with the Msunduzi Municipality has not yet been employed to its full potential. How can this partnership be developed? Thus the following chapter investigates how the role of policy networks could be enhanced.

CHAPTER FOUR
THEORETICAL FRAMEWORK:
POLICY NETWORKS FOR ENVIRONMENTAL MANAGEMENT

How About Collaboration?

4.1 Introduction

Can policy networks assist government in environmental policy making and implementation, with particular reference to the Pietermaritzburg Chamber of Business as a network that already exists? With contemporary government characterized by an inadequacy of resources (skills, expertise and financial), it is therefore imperative that the Msunduzi Municipality seeks cooperation, assistance and partnership from all sectors of society. This calls for pooling these resources from a wide range of actors such as public organizations, private organizations and quasi-private organizations as well as businesses in order to achieve desired policy intentions. This approach is adopted because, as was shown in the last two chapters, objectives of environmental policy have proved difficult to achieve for both the Msunduzi Municipality and the PBC. The investigation of both Municipality and the PCB's environmental activities revealed that one of the causes of policy failures is lack of collaboration. Thus this chapter aims to propose collaboration and partnership through policy networks as one of possible remedies to these policy ills at Msunduzi Municipality. This chapter aims to discuss public policy networks as a relatively new form of public governance. This discussion will begin by defining policy networks and why policy networks matter, especially now. Then how these policy networks are arranged and managed as well as how public policy is implemented in a network setting will be explained.

4.2 The Nature of Policy Networks

The late 1970s and 1980s witnessed a period of changing administration which defined governance and public management as the governance of complex networks, consisting of many different actors, such as parts of national, provincial and local government, political and social groups, pressure, action and interest groups, societal institutions, private and business organizations. All these actors have different and sometimes conflicting interests and objectives as far as policy process is concerned. In this form of

public administration, government is no longer seen as the single dominant actor that unilaterally undertakes all the responsibilities in the society. “Instead the government is seen as one of the actors among many, who are interdependent within the social system. The idea of interdependency of different actors in the policy process was then elaborated from various scientific perspectives, leading to the introduction of the concept of ‘policy network’” (Kickert and Koppenjan, 1997: 39).

Peterson (2003:1) explains that “the term ‘network’ is frequently used to describe clusters of different kinds of actors who are linked together in political, social or economic life. Networks may be loosely structured but still capable of spreading information or engaging in collective action” (Peterson and O’Toole Jr. cited in Peterson, 2003:1). “The growing interest in policy networks and their impact on governance reflects how modern society, culture and economy are all increasingly products of relations involving mutuality and interdependence, as opposed to hierarchy and independence” (Peterson, 2003:1). He continues: “linkages between organizations, rather than organizations themselves, have become the central analytical focus for many social scientists” (Peterson and Bomberg, cited in Peterson, 2003:1).

According to Kickert, Klijn and Koppenjan (1997: 39) and Borzel (1997:5-6), after the introduction of the non-profit sector in public management and governance, as well as de-bureaucratization and withdrawal of the state from many societal sectors, public management was defined no longer as management of only public service issues, but “the governance of complex networks, consisting of many different actors, ranging from government, CSOs and private or business” (Borzel, 1997:5-6). Based on such views, governance is now so complex that government has to rely on partnerships to be able to achieve policy intentions. All actors in these partnerships have different and sometimes conflicting interests and objectives. All these actors come with different perceptions and different assumptions in defining social problems that need policy intervention. Kickert and Koppenjan (1997: 39) and Borzel (1997:5-6) explain that in the network setting as characterizing contemporary policy-making, it is very important for government to seek consensus, resources and expertise from different social groups that are considered to be

central to public policy-making (Kickert and Koppenjan, 1997: 39 and Borzel, 1997:5-6). It is for these reasons then that governments have become more and more cognizant of the importance of working cooperatively with most stakeholders (organizations and institutions both public and private) that exist in society for the achievement of common policy objectives.

4.3 Defining policy networks

Different scholars have defined the concept of policy network in different ways. For example, Benson (cited in Klijn, 1997: 30) defines policy networks as “complex sets of organizations connected to each other by resources dependencies and distinguished from each other by breaks in the structure of resource dependency.” On the other hand, Klijn (1997: 30) defines policy networks as “more or less stable patterns of social relations between interdependent actors, which takes shape around policy problems and/or policy programmes”. Common between these two definitions is the concept of interdependency, especially based on resources that are required for the design and implementation of the public policy, which is arguably the core of policy networks because whatever interaction takes place is highly dependent on this interdependency and success is achieved through it. What is also highlighted by policy network analysis is the importance of partnership, collaboration and cooperation among policy actors in defining policy problems, as well as in designing measures to deal with them.

Brinkerhoff and Brinkerhoff (1997: 168) define civil policy networks broadly as “cross-sectoral collaborations whose purpose is to achieve convergent objectives through the combined efforts of both sets of actors, but where the respective roles and responsibilities of the actors involved remain distinct. The essential rationale here is that these interactions generate synergistic effects; that are more and/or better outcomes are attained than if network partners acted independently” (Brinkerhoff and Brinkerhoff, 1997:168). With cross-sectoral collaboration, this definition implies that public policy processes take place between and among different sectors of the society; public organizations or institutions and private organizations which include businesses. Public policy can also be a product of collaboration between different spheres or levels and tiers of government

such as central, provincial and local spheres of government. In as far as convergent objectives are concerned, the argument is that in a network policy setting, different social sectors and spheres of government work together cooperatively towards achieving common policy objectives or goals and this is more easily achieved through combined efforts as opposed to single actors acting alone to achieve policy goals. Though different actors work together towards policy goals, their roles and responsibilities in their respective organizations remain distinct. While these actors engage in the policy network, the interests of their organizations are also not undermined or compromised. Instead they work towards achieving results that will be to the benefit of all who are concerned in the policy process. Working as a network produces results that are greater than the sum of their individual effects or capabilities; therefore, it is easier to achieve more when working cooperatively and jointly as opposed to working as individuals.

Having discussed the activities of both Msunduzi Municipality and the PCB, the aim is not to prescribe how these bodies should operate with regards to managing environmental policy. But based on environmental policy ills and challenges posed by resources scarcity, and based on different activities that they are engaged in on environmental management, their partnership could enhance environmental management. In short, effective environmental management in Msunduzi Local Municipality could be better achieved if both the municipality and the PCB form partnership and collaborate through policy network. This argument is based on the nature of the profile of industries (**See Appendix D**) that exist within the PCB. There are different environmental consultants, environmental researchers and various other companies which all are concerned with environmental management. The Municipality possesses an environmental wing, a LA21 Committee, which specifically addresses environmental issues. However, the problem seems to lie with fragmentation within the structures the Msunduzi Municipality and the PCB. If these activities can be pooled in a policy network so that these bodies collaborate in a network for environmental management, better results could be achieved.

4.4 Basic characteristics of policy networks

Klijn (1997:32) describes three fundamental characteristics which distinguish policy networks:

a) Networks exist because of interdependencies between and among actors

Klijn describes interdependency as a precondition for policy networks. Policy networks develop because no single actor, neither the Municipality nor the PCB, possesses all the necessary resources to achieve environmental policy intentions. These interdependencies would allow more interaction between the municipality and the PCB, which is important for creating and sustaining relations patterns between the two. Interdependencies further imply that there is something to be gained by all the actors involved (Klijn, 1997:31).

b) Networks consist of a variety of actors each with their own goals

Secondly, policy networks are products of a wide variety of actors who all come to the policy arena with their own distinct goals as well as strategies of how to achieve those goals. There is no central actor and no preset goals which can be used as a measure of effective policy (Klijn, 1997:31-32). Both the Municipality and the PCB are characterized by diversity, especially the PCB in the form of the nature of its membership. Similarly, in the Municipality, and specifically within its LA 21 committee, there is a diversity of membership ranging across different political parties, social groups, businesses, and industries, research and education institutions and NGOs. All these actors have their different agendas but a policy network would help them realize their own as well as common goals.

c) Networks consist of relations of a more or less lasting nature between actors

What develops from interdependencies and interaction between actors is the creation of certain patterns of relations which highly influence the kind of interaction that take place within networks. Klijn explains that in most cases actors who occupy central positions in the network are in a better position to reach their goals because their positions afford them opportunities to influence other actors and to mobilize resources as required by the policy process (Klijn, 1997:32).

Central and most important among these policy network characteristics is the importance of continuous communication, trust and cooperation among policy actors. These

attributes are pillars essential to achieving actors' intentions through a policy network. It is, though, important to emphasize that not all actors' expectations can be fulfilled. However, through ongoing communication, cooperation and bargaining, the policy process drives towards achieving ends that benefit all actors within the network (Klijn, 1997:31-32).

Dealing with public problems in the policy network setting involves interactions between and among governmental agencies, in this case DEAT, KZN-DAEARD and Msunduzi Municipality (as bodies with mandates to implement environmental policy), quasi-governmental bodies, private organizations and civil society. In such a policy network, their resources would differ, as well as the goals they pursue and their perceptions and assumptions of the problem that is being dealt with. The issue of power of each organization in the network can be attributed to the possession of resources as also required by policy implementation. The more resources an organization possesses the more power and influence it has over the policy process in a network.

Interdependency, cross-sectoral collaboration and convergent objectives are key factors and characteristics of the network approach; accordingly, the combined effort of different policy actors could be greater than policy intentions achieved by either the Msunduzi Municipality or the PCB acting alone as independent organisations.

4.5 Interdependency in the policy network

One of the factors which influences a policy network approach is interdependency in a governance landscape which is characterized by inadequate resources and information, where these resources are widely dispersed across state, non-state organizations and NGOs. Borzel (1997) argues that a policy network allows governments to mobilize political, material and non-material resources in situations where these resources are widely dispersed between and across public and private actors. Unlike the rational organization approach which sees organizations as entities without relations with their environment, Klijn (1997:16-17) argues that in a policy network approach an organization is largely dependent on its environment for survival. It needs resources and

clients to sustain itself. In the case of Msunduzi, the Municipality highly depends on its business sector and civil society for effective management of policies on environment. This further means that the PCB and the Municipality need to rearrange their internal organizational structures in response to the characteristics and the requirements of their environment. Each organization has to interact with others in order to acquire the necessary resources for achieving its goals since none can generate all the necessary resources on its own (Klijn, 1997:21). Furthermore, based on resource interdependency among public policy actors, O'Toole *Jr*, Hanf and Hupe (1997: 137) state, that “in most cases it is very unlikely that there can be any institution of government which possesses any sufficient authority, resources and knowledge to individually act, let alone achieve policy intentions”. Instead, they argue, “policies require cooperative efforts of multiple actors all possessing some capabilities for action and each dependent on other to solidify policy intention and to seek its conversion into action” (O'Toole *Jr*. Hanf and Hupe, 1997: 137). Thus one of the ways in which the Municipality can realize successful implementation and management of environmental policy is through collaboration and partnership by forming policy networks. However, it is equally important to bear in mind that like any governance tool, a policy network needs its own way of management for effective policy implementation.

4.6 How are policy networks organized?

Having explored how different scholars characterize policy networks, it is crucial to explore to how these networks are organized, arranged and managed, as well as how they can work for the Msunduzi Municipality. Analysis of modern governance frequently seeks to explain policy outcomes by investigating how policy networks, which facilitate bargaining between stakeholders over policy design, are structured in a particular policy sector. Borzel (1997: 7) argues that “unlike hierarchies, policy networks do not necessarily have dysfunctional consequences. While hierarchies produce ‘losers’ who have to bear the costs of a political decision (for example the exploitation of the minority by the majority and vis-à-vis) through bargaining and negotiating, policy network have the potential to produce consensus necessary for the realization of common gains” (Borzel, 1997:7). This kind of an approach could enhance environmental policy

implementation in the Msunduzi Municipality. In the policy network both the Municipality and the PCB would define problems cooperatively, which in this case is environmental management that requires policy intervention. Different causes and assumptions would be attached to particular environmental problems and issues. Based on those assumptions the Municipality and the PCB would bargain, negotiate and introduce interventions that should see environmental problems being remedied. So, in the policy network approach, even the minority groups such as NGOs and CBOs, even individuals would be given an opportunity to present their assumptions on the causes as well as possible interventions to the policy problem. In this way, therefore, the policy process is less likely to produce losers because the decision-making process would be a cooperative, participative and a consultative process accepted by most.

Borzel (1997:4) distinguishes five types of networks according to the degree to which their members are integrated, the type of their members, and the distribution of resources among them. He places network types on a continuum ranging from highly integrated policy communities at the one end and loosely integrated issue networks at the other end; professional networks, inter-governmental networks, and producer networks lie in-between (Borzel, 1997:4 and Klijn, 1997:23-24).

Borzel also applies this policy analysis to the relations between government and industry. But he stresses the disaggregated nature of policy networks in the policy sectors, suggesting that government-industry relations have to be analyzed at the sub-sectoral, not at the sectoral, level meaning that the interaction that exists between government and industries is more at local government level than at national level (Borzel, 1997:4).

An advantage of this form of governance is that it will allow the Msunduzi Municipality to mobilize required resources for management of environmental policy in situations where these resources are widely dispersed between and across public and private actors which would be a challenge and sometimes impossible had the municipality acted alone. Hence, policy networks are a response to problems of inefficiencies of traditional public policy. In this view, policy networks need to be understood as “management and

governance structures of relatively stable and ongoing relationships which are able to mobilize and pool dispersed resources so that collective (or parallel) action can be orchestrated toward the solution of a common policy” (Borzel, 1997:6).

4.7 Important factors in managing policy networks

It is imperative to look at the factors that are important to the management of this form of governance. In this regard, Agranoff and McGuire argue that “today’s managing occurs routinely at or outside of the home organization. Instead, today public managers while managing their organizations and developing administrative routines and dealing with internal human relations issues, but typically must also be networking on a regular basis. This comes about not in reaction to a problem, but as regular interaction with the external field, nurturing the soil for potential connections, and working on collaborative projects as well as possible new partners” (Agranoff and McGuire, 1999:22-23). This argument thus goes to show that seeking collaboration and partnership in modern governance is not just an option which a public manager undertakes because there are no other activities to do. Instead networking and seeking partnerships is becoming more of an imperative.

In addition, public managers are usually operating in several networks. “Public administrators and other government officials operate in networks that involve officials from within the same government but representing other agencies, representatives of profit-making and non-profit organizations, all located within the jurisdiction, and representatives from organizations in all sectors located outside of the jurisdiction” (Agranoff and McGuire, 1999:22-23). In the case of Msunduzi Municipality the composition of the LA 21 committee is made up of a variety of representatives from a wide range of agencies and organizations all trying to work towards common objectives. Public managers have to sense and see who their partners are. This therefore means that the Msunduzi Municipality has to assess whether it has managed to attract all the necessary partners for environmental policy implementation “as well as nurturing the soil for potential connections, and working on collaborative projects as well as possible new partners” as is explained in general terms by Agranoff and McGuire (1999:22-23).

Network management is, in essence, an inter-organizational activity. In this way a manager has to handle complex interaction settings and work out strategies to deal with the different perceptions, preferences and strategies of various actors involved. Management in this setting then aims at initiating and facilitating interaction processes between and among actors, creating and changing network arrangements for better coordination (Kickert and Koppenjan, 1997:10-11). Achieving such intentions has, however, proved to remain a challenge not only for Msunduzi Municipality but also for most municipalities in South Africa. Such issues of incapacity within local governments were discussed Chapter Two.

More than managing diversity, managing networks involves managing flexibility towards collective efficiency. Agranoff and McGuire (1999:16-19) argue that while traditional bureaucratic structures are known to be rigid, rule-bound and predictable, networks offer the potential for flexibility, capacity for adjustment to changing circumstances, and openness to new ideas and innovations. Network management also requires continuous negotiation among participants or actors as well as problem solving through such different processes as involvement, consultation, integration, co-operation, co-ordination and co-production (O'Toole Jr. et al, 1997:136-140, Agranoff and McGuire, 1999:24-25 and Agranoff and McGuire, 2001:16-19). This argument by these policy scholars suggests that the success of the manager in a network context is highly dependent on every kind of support that he or she gets from the mother organization. The ability to manage externally is largely related to the internal conditions of the manager's primary organization. This further entails cooperation and political willingness on the part of government officials within that particular department or ministry to conduct an open and continuous dialogue with existing and potential partners. This sort of support should also be encouraged from top management such as ministers, chief executives officers, and throughout the organization, and without it network management can not successfully achieve desired policy goals.

Furthermore, the ability to trace and understand the skills, knowledge, and resources of others is a critical component of networking capacity. Policy network managers need to

identify and include in the network the needed expertise and resources to move any project forward. Policy network management also needs to know who possesses required resources: money, technology, information, expertise, time, and other necessary commodities to implement public policy in network setting (Agranoff and McGuire, 1999:28). In order to achieve joint action on problems within existing networks, barriers which hamper this action need to be removed. For example, in the case of Msunduzi, the Municipality should be prepared and anticipate exchanging their 'go alone strategies' for contingent or cooperative strategies. In order to achieve this kind of implementation they must recognize that cooperation is to their advantage (Klijn, 1997:41).

4.8 Policy implementation in network setting

It is necessary to understand policy implementation in collaborative policy contexts. In a network setting the interactions of a number of public and private actors within a specific policy field needs to be considered. "In general, this approach is effective in providing insights into how local actors utilize programmes from higher levels of government for their own purpose and thus underline the anticipated effects of the implementation of policy programmes" (Klijn, 1997:18).

O'Toole Jr. and Montjoy (1984: 492) explain that "three different and most important factors induce commitment and implementation in policy network setting: (a) authority (cooperation driving from the sense of duty); (b) common interest (cooperation because each participant values the goal); and (c) exchange (cooperation to receive in turn something other than achievement of the goal)". What appears to be common among these factors is cooperation and a coordinated effort among policy stakeholders to achieve a desired goal.

Weimer and Vining (2005:276-278) explain that for successful policy implementation it is essential to know who among the policy actors has the essential elements and or ingredients. Also critical in this case is the process of assembling the required elements from those who own or possess them. The more varied and numerous the ingredients are, the higher the chances that the implementation of the decision or policy experiencing

difficulties or problems. To encounter these challenges, there are different questions that policy managers should be asking before trying to assemble these elements or resources. These questions include: who has the required resources among policy actors; and what resources are required by the body responsible for the implementation (Weimer and Vining, 2005:276-278). Weimer and Vining's argument around resources mobilization indicates that it is important for any policy implementers to know beforehand as to how they will go about acquiring all the required resources for policy implementation as well as understanding what will be the next step if these resources are not acquired as expected. So, in a nutshell, there should be cooperation between the owners of means of implementation and those who are responsible for assembling these resources in order to achieve successful implementation.

4.9 Final remarks

The overall argument is that with policy networks and through partnership and collaboration between the Msunduzi Municipality, businesses and non-profit organizations, effective environmental management and environmental policy implementation could be enhanced. Such an approach would allow the Municipality and policy managers to be able to mobilize political and material resources that are dispersed across both public and private policy sector actors in a situation of inefficiencies and incapacity, where resources are scarce.

The Msunduzi Municipality faces the dilemma of choosing between socio-economic development through industrialization and urbanization and protecting the environment. The challenges posed by resources scarcity could be mediated through collaboration and partnership through policy networks.

What then emanated from examining different legislation and policy regulations is that although they provide for sustainable development, municipalities and different management structures that are in place are inadequate, incapacitated, and therefore, less effective in achieving desired goals and objectives of environmental management. An approach that might overcome these challenges would be to seek collaboration and

partnership with other policy actors which include both state (Msunduzi Municipality) and non-state environmental managers (business and industries as well as non-profit organizations). This would allow the Msunduzi Municipality to be able to mobilize capacity and resources for environmental policy implementation.

In the modern state policy intentions are achieved through the concerted efforts of different stakeholders, that is, government, civil society organizations and business and private organizations. Governance and policy implementation no longer falls entirely on the government alone, but instead has become a shared responsibility. Through partnerships and collaboration, policy actors are able to achieve desired policy objectives where resources as required by policy implementation are widely dispersed across both public and private policy actors. Policy networks are a policy tool which would allow the Msunduzi Municipality, as an agent which has a formal mandate to protect the environment for the present and future generations, to better mobilize these resources to achieve policy goals.

The structures and initiatives to achieve this collaboration are already in place. For example, the Municipality's LA 21, different industrial and businesses activities such as the Air Quality and Environmental Management Forum, have the potential to enhance effective environmental management. However, what remains is to manage the relationships that already exist between the Municipality and non-state environmental managers, while seeking more partnerships. While at times these networks appear to be invisible, they do exist and they have an impact on the success and failures of many public policies. It is then important for the public managers to have the ability to sense and see who their partners are, and who the potential ones could be.

The Pietermaritzburg Chamber of Business was identified as a significant business network in Pietermaritzburg. Investigating the interaction and relationship between the PCB and the Msunduzi Municipality showed that though the PCB has environmental management initiatives in the form of Air Quality and Environmental Management Forums and Local Economic Development, they do not impact much on the management

and implementation of the Municipality's environmental management policy. One of the key characteristics of policy networks is interdependency caused by a diversity of resources which are widely dispersed across public and private policy actors. The challenge is to ensure that such interdependency is employed effectively for managing environmental policy. What this study discovered, though, is that the PCB is an environmental stakeholder which possesses resources, not only financial resources but also political abilities, which are reflected in its willingness to care about the environment through the Air Quality and Environmental Forums they established.

Though different legislation such as NEMA and Air Quality Act provide for cooperative governance and partnership between the government and civil society organizations in managing environment policies, these options have not been explored fully. For example, with the case of LA 21, not much has been achieved because of incapacity presented by such challenges as resource scarcity, and fragmentation among policy actors. This became evident when it was discovered that the LA 21 committee did not include all relevant environmental stakeholders such as businesses and civil society organizations and environmental movements, but includes mainly municipal officials.

With regards to inter-organizational relations, particularly between the government departments and across the different spheres (national, provincial and local), this study discovered that there is less cohesion in so far as policy implementation is concerned. Having decentralized environmental management functions to districts or local governments, these government agencies still have little discretion on environmental decision-making pertaining to their jurisdiction. Thus no matter how well and progressive policy design can be, without appropriate coordination of activities between and among relevant and involved stakeholders, policy cannot achieve its intended objectives. In addition, one other important factor that this study discovered to be central to the success or failure of any environmental policy is political will and political buy-in among all policy actors. Political will needs to be achieved within the Msunduzi Municipality itself before non-state actors can be persuaded to come on board.

Through various interviews with different officials from both the PCB and the Msunduzi Municipality, it transpired that some progress is being made to manage the environment through negotiation and consultation between the Municipality and some industries. However, such progress is being limited by fragmentation caused by the fact that these negotiations are based on engaging with individual industries, rather than through the PCB which could have facilitated collective engagement with a number of businesses and industries. If these partnerships are negotiated through the PCB, they could produce better results and attain more successful partnerships because it would involve more industries and businesses, CBOs and NGOs. In other words, more effective management of environmental policy in Pietermaritzburg could be achieved by the Msunduzi Municipality and the PCB forming policy networks in partnership with all the relevant stakeholders.

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Andrew Layman	PCB	CEO	07 th October 2008	Pietermaritzburg
Clive Anthony	Msunduzi Municipality	Manager: Air Pollution & Waste Management	06 th November 2008	Pietermaritzburg
Rodney Bartholomew	Msunduzi Municipality	Manager: Environmental Conservation	26 th August 2008	Pietermaritzburg

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APPENDIX A

TERMS OF REFERENCE :

MSUNDUZI LOCAL MUNICIPALITY LOCAL AGENDA 21 ENVIRONMENT FORUM

Definitions: Unless the context indicates otherwise:

- “Forum” means the Local Agenda 21 Environment Forum established in terms of environmental legislation, the *Agenda 21 Treaty* adopted at the Rio Earth Summit, the *Plan of Implementation* adopted at the 2002 World Summit on Sustainable Development and by resolution of the Executive Committee dated 21 February 2006.
- “Executive Committee” means the Executive Committee of the Msunduzi Municipality.
- “Municipality” means the Msunduzi Municipality.

Rules And Procedures

1. The Local Agenda 21 Environment Forum reports to the Executive Committee.
2. Membership shall consist of five (5) Councillors as provided for in Section 79(1) (b) of the Local Government: Municipal Structures Act, 1998 (Act 117 of 1998) who shall be the voting members, and the representatives of relevant Municipal, Provincial and State Departments, professional institutions, Parastatals and formally constituted Non-Governmental Organisations (NGOs), Community Based Organisations (CBOs), Non-Profit Organisations (NPOs) and Public Benefit Organisations (PBOs).
3. Applications for membership shall be approved by a panel consisting of voting members and five (5) municipal officials including the Municipal Manager's Representative and the Manager: Conservation and Environment.
4. Membership shall be reviewed by the Membership Panel every four (4) years or when the need arises.
5. Additional members with expertise and or duties relevant to the functions of the Forum may with the approval of the Membership Panel, be co-opted.
6. The Chairperson shall be a member of the Executive Committee.
7. A meeting of the Forum shall be properly constituted by the attendance of a minimum of three of the five Councillors.

8. In the absence of the Chairperson and provided there is a quorum present at the meeting the members present shall appoint an Acting Chairperson from amongst the Councillors present.
9. A decision of the Forum shall be supported by a majority of the voting members present at the meeting.
10. If on any matter before the Forum there is an equality of votes the Chairperson, or the member presiding at the meeting as the case may be, shall exercise a casting vote in addition to such member's vote as a member.
11. Only members of the Forum shall be permitted to vote on any matter before the Forum.
12. The Forum shall meet:
 - Whenever necessary, but at least once every month.
 - At a time and date determined by the Chairperson, in consultation with the members of the Forum and the Sound Governance and Human Resources Business Unit.
 - At a venue to be arranged with the Sound Governance and Human Resources Business Unit.
13. Any item submitted to the Forum for consideration shall be in the form of a written report with suitable recommendations accompanied by comments of affected Municipal Business Units.
14. All written reports shall be submitted to the Committee Officer responsible for compilation of the agenda prior to the closing date of the agenda.
15. A report which does not comply with the requirements of 13 and 14 above shall only be considered at the discretion of the Forum if the Forum is of the view that the incomplete, or late, submission of the report is justified in the circumstances.

Terms of Reference:

1. Undertake an analysis of project and programmes identified in the Integrated Development Plan (IDP) and the Municipal Integrated Environmental Management Policy (IEMP) explicitly addressing environmental issues and concerns.
2. Define project objectives based on sustainability principles.
3. Undertake project cost/benefit analyses (determine actual environmental costs) and translate this into financial plans and a capital investment framework.

4. Develop environmental key performance indicators (KPI's).
5. Determine the organisational arrangements, restructuring or reform needed in order for the municipality to address environmental issues raised in the IDP, IEMP and Environmental Management Framework (EMF).
6. Facilitate project planning by agreeing on action goals, set targets and triggers, create strategies and commitments and formalise these into action plans.
7. Facilitate the inclusion of sustainable resource use and biodiversity conservation criteria into the IDP thereby promoting economic opportunities in new sectors such as renewable energy, waste recycling, bio-centred biotechnology and biodiversity conservation.
8. Ensure proposal calls for development reflect and demonstrate sustainable development principles.
9. Ensure greater alignment of sustainability criteria, including biodiversity, into all levels of integrated and spatial planning, as well as into project formulation.
10. Facilitate the development and implementation of an Air Quality Management Plan and an Air Quality Information System.
11. Facilitate the development and implementation of an Integrated Waste Management Plan.
12. Facilitate and contribute to the development and implementation of an Environmental Management Framework.
13. Ensure projects are in keeping with and aligned to the IEMP Vision, Goals and Objectives including the function to:
 - Improve the quality of the environment and the well-being of fauna, flora and humans.
 - Preserve biodiversity and minimise the loss of species through development.
 - Conserve and promote the sustainable use of indigenous plants.
 - Maintain air quality at levels that do not threaten the environment and human well-being.
 - Ensure the quality of water from rivers, streams and wetlands is suitable for the maintenance of biodiversity and the protection of human well-being.
 - Plan for and facilitate a shift from the use of non-renewable to renewable resources.
 - Protect the City's landscapes and townscapes.
 - Ensure that the physiological and psychological effect of noise, shock and vibration do not exceed legislated standards.
 - Ensure an effective and efficient waste management system.

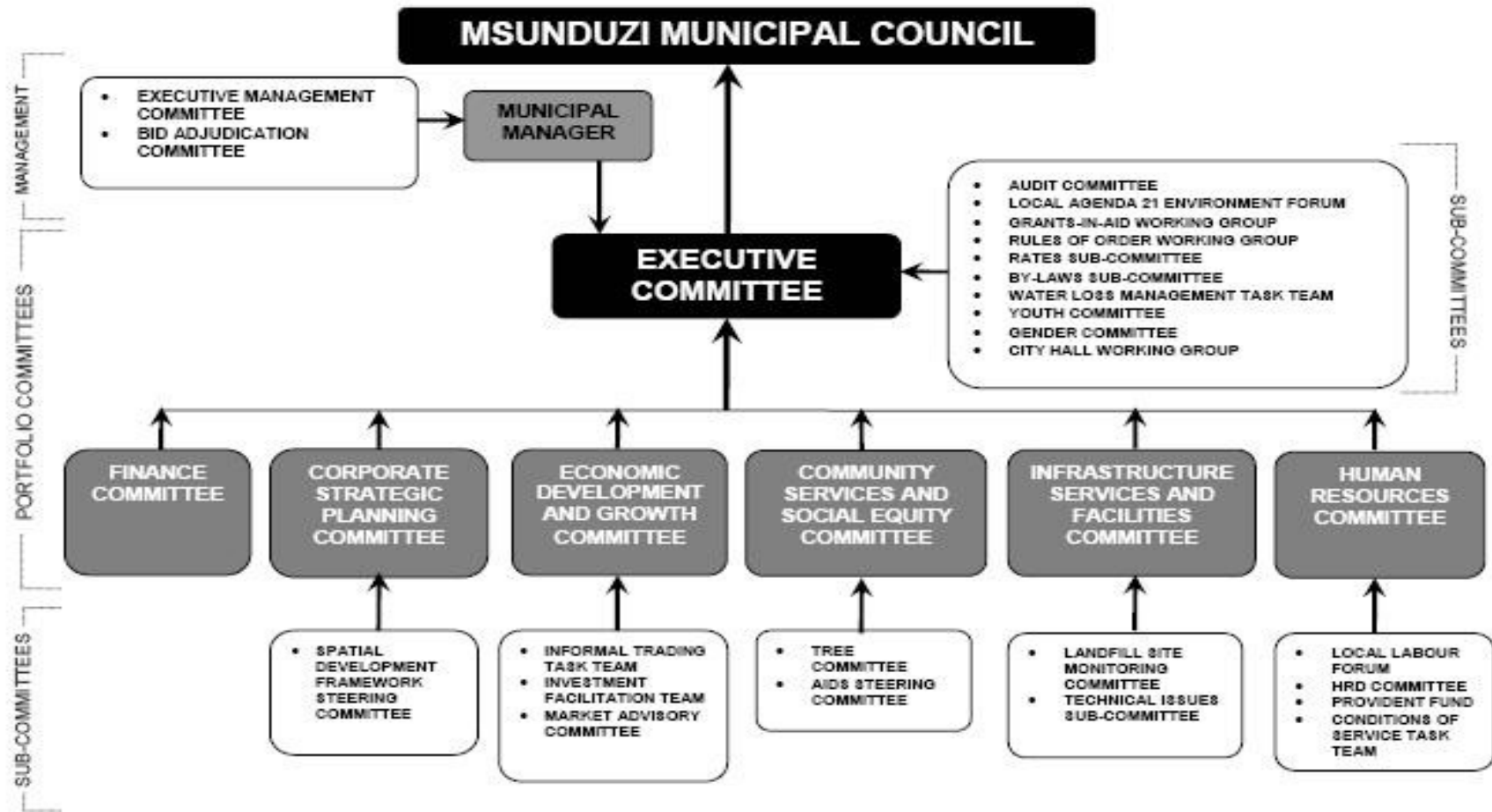
- Ensure a balance between the need for development and its effect on the environment.
- Support education and training initiatives that promote environmental protection and enable sustainable resource use.
- Preserve and improve the cultural heritage.

Standard Rules and Procedures for Council and its Committees

- Where applicable sections 1 – 15 of the Rules of Council and Its Committees shall apply.

APPENDIX B

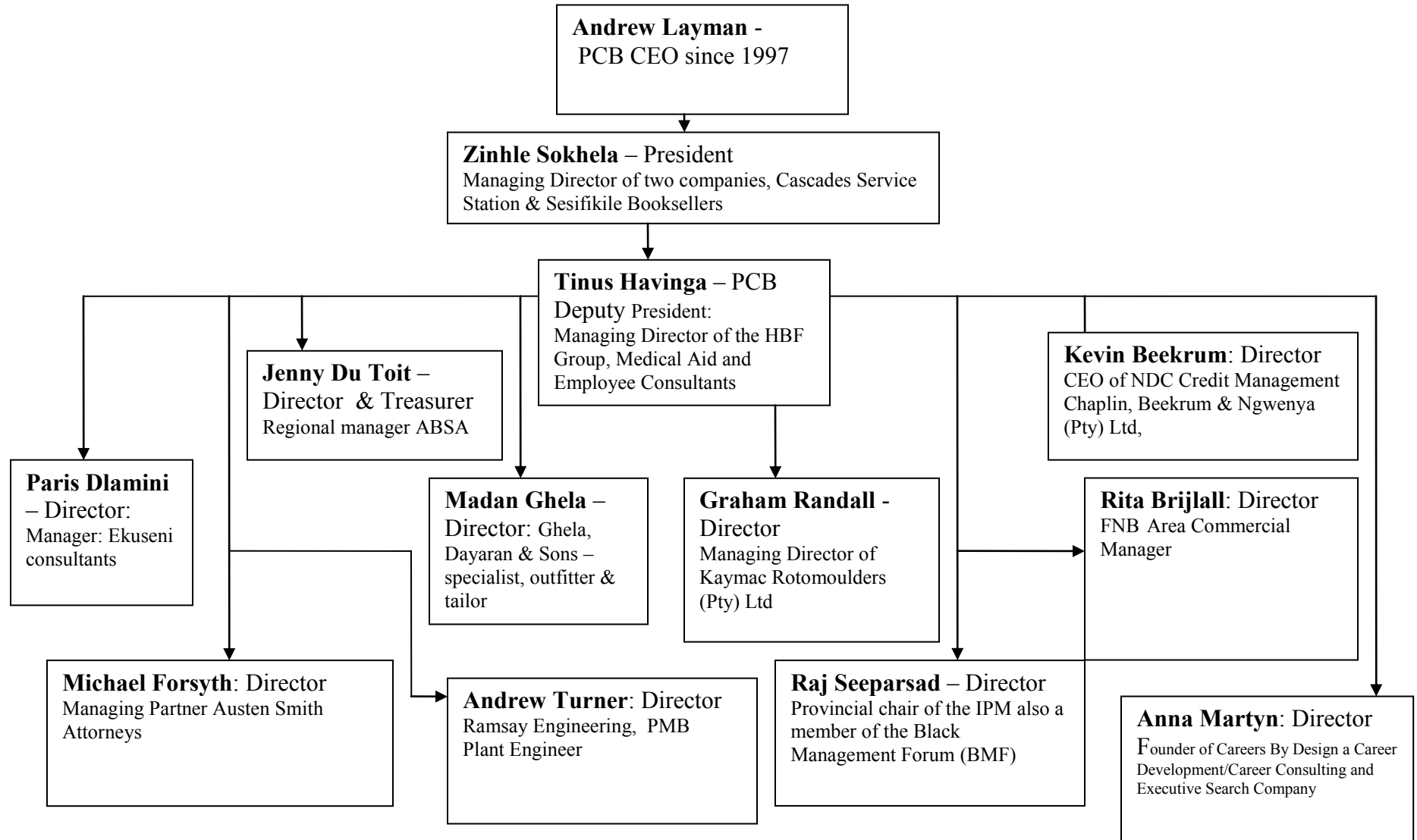
Msunduzi Municipality Organizational Structure



Adopted form Msunduzi Municipality organizational structure: (<http://www.msunduzi.gov.za/site/managementmunicipalstructure>)

APPENDIX C

PCB BOARD OF DIRECTORS



APPENDIX D

PCB membership profile and companies' activities (selected few members)

No	Business Name	Organization Type	Products/Activities	Environmental Management Initiatives
1	Sealake Industries	Manufacturing	Oils/Soap/Candles	Attend Air Quality & Environment Forum at the PCB
2	C.N.B. Industries	Manufacturing	Shoes Manufacturing	Attend Air Quality & Environment Forum at the PCB
3	The Bizmag	Advertising	Advertising for businesses, big or small	Attend Air Quality & Environment Forum at the PCB
4	Rupert Buhr - Chartered Accountants	Professional and financial services.	Accounting, auditing, tax and related services for small to medium size businesses	Attend Air Quality & Environment Forum at the PCB
5	ABSA Business Banking Service	consumer sales & other service	Finance division - medium businesses	Attend Air Quality & Environment Forum at the PCB
6	Action Refrigeration & Airconditioning	Sales & Service	Air-conditioning and refrigeration for industrial and commercial environment.	
7	Enviroscope	Service/Environmental Consultants	Environmental impact assessments. Environmental management plans, basic assessment processes, feasibility assessments, vegetation and wetland studies.	Environmental education to its counterparts at the PCB. Environmental impact assessments (EIAs) Environmental management plans, basic assessment processes, feasibility assessments, vegetation and wetland studies Attend Air Quality & Environment Forum at the PCB
8	Geosure	Professional & Financial Services/Consultants	Consulting Geotechnical engineers, geologists, environmental scientists and wetland delineation	Consulting Geotechnical engineers, geologists, environmental scientists and wetland delineation. Attend Air Quality & Environment Forum at the PCB
9	Institute Of Natural Resources	Environmental Consultants	Environmental reporting and auditing	Attend Air Quality & Environment Forum at the PCB
10	Projects Safety	Training	Occupational health, safety and environment, audits, surveys and consultation.	Attend Air Quality & Environment Forum at the PCB
11	SSI Engineers & Environmental Consultants	Consumer sales & other services	Consulting civil and structural engineers	Attend Air Quality & Environment Forum at the PCB

12	Talbot & Talbot	Consumer sales & other services	Waste treatment-laboratory services/environmental	Environmental rehabilitation in case of environmental degradation as sometimes caused by chemical spillages and other related incidents. Attend Air Quality & Environment Forum at the PCB
13	Udidi Project Development Company (Pty) Ltd	Consumer sales & other services	Environmental/planning & socio economic development	Attend Air Quality & Environment Forum at the PCB
14	Wildlife And Environment Society Of Sa (WESSA)	Environmental specialists		Government parastatal dealing with natural resources management, sustainable development and environmental related issues. It is also a body of informed public opinion on conservation matters. Attend Air Quality & Environment Forum at the PCB
15	WSP Environmental (PTY) LTD	Environmental Consultants	Environmental & occupational health consultancy	They have air quality monitoring and testing stations around Pietermaritzburg. Some of their work and findings are also presented in the PCB Air Quality and Environmental Management Forum which is held quarterly.
16	Van Rijn Agriculture SA	Agricultural services	Agriculture services, sustainable farming, soil testing.	Pollution & Waste Management post; Occupational Health & Safety post Emergency & Evacuation procedures Waste Classification Attend Air Quality & Environment Forum at the PCB
17	Enviroserv	Consumer sales & other services	Waste Management Services	Environmental Impact Assessments (EIAs) Environmental management plans, basic assessment processes, feasibility assessments, vegetation and wetland studies Attend Air Quality & Environment Forum at the PCB
18	Anchor Chemicals A Division Of Zenith Holdings	Manufacturing	Chemicals	Attend Air Quality & Environment Forum at the PCB
19	Donnatoni (PTY) LTD	Services	Sales and marketing training. Food additives and chemicals and pharmaceuticals. Distribution. Consulting and project management.	Attend Air Quality & Environment Forum at the PCB
20	Dystar Boehme Africa (Pty) Ltd	Manufacturing	Chemicals & Supplies For Textile, Leather And Paint	Attend Air Quality & Environment Forum at the PCB
21	Kleenline	Consumer sales & other services	Chemicals / brushware	Attend Air Quality & Environment Forum at the PCB

22	Natal Assoc. Chemicals / Dekade Paints (Pty) Ltd	Manufacturing	Paint	Pollution & Waste management post; Occupational Health & Safety post Emergency & Evacuation procedures Waste Classification Air Quality monitoring/outsourcing
23	R.T. Chemicals	Manufacturing	Chemicals. Insecticides, pesticides, fungicides, Herbicides, insecticides, Fungicides, Plant Growth Regulators, Adjuvants and Humics and Foliar Feeds	Pollution & Waste Management post; Occupational Health & Safety post t Emergency & Evacuation procedures Waste Classification Air Quality monitoring Energy & natural resources conservation Regular Environmental audits
24	Steiner Hygiene	Consumer sales & other services	Hygiene equipment/chemicals/paper products/	Attend Air Quality & Environment Forum at the PCB
25	Sud-Chemie Water & Process	Manufacturing	Chemicals - water treatment	Attend Air Quality & Environment Forum at the PCB
26	W.K. Croxton (Pty) Ltd	Consumer sales & other services	Raw materials and chemicals	Attend Air Quality & Environment Forum at the PCB
27	Citi Board & Timber	Retail & Manufacturing	Suppliers of board products, timber and hardware. Cutting and edging. Manufacturing and installing of built in cupboards.	Attend Air Quality & Environment Forum at the PCB
28	PG Bison	Manufacturing	Suppliers of board products, timber and hardware. Cutting and edging.	Pollution & Waste management post; Occupational Health & Safety post Emergency & Evacuation procedures Waste Classification Air Quality monitoring Energy & natural resources conservation Regular Environmental audits
29	Goodhope Holdings	Manufacturing	Timber Products	Occupational Health & Safety post Emergency & Evacuation procedures Environmental audits Attend Air Quality & Environment Forum at the PCB
30	J & K Timbers	Manufacturing	Roof truss/timber related products/materials to building industry	Attend Air Quality & Environment Forum at the PCB

31	Natal Forest Products	Consumer sales & other services	Timber treatment	Occupational Health & Safety post Emergency &Evacuation procedures Attend Air Quality & Environment Forum at the PCB
32	NTC Forestry Co-Operative Limited	Consumer sales & other services	Timber farming	Occupational Health & Safety post Emergency &Evacuation procedures Attend Air Quality & Environment Forum at the PCB
33	Singisi Forest Products (Pty)	Consumer sales & other services	Forestry timber and sawmilling	Occupational Health & Safety post Emergency &Evacuation procedures Attend Air Quality & Environment Forum at the PCB
34	Woodrite	Manufacturing	Timber pallets, crates and packaging	Occupational Health & Safety post Emergency &Evacuation procedures Attend Air Quality & Environment Forum at the PCB
35	Hill Equipment	Manufacturing	Equipment hire/forestry	Occupational Health & Safety post Emergency &Evacuation procedures Attend Air Quality & Environment Forum at the PCB
36	Pangolin Manufacturing	Manufacturing	Protective clothing for the forestry industry	Occupational Health & Safety post Emergency &Evacuation procedures Attend Air Quality & Environment Forum at the PCB
37	F.F.S. Refiners (Pty) Ltd	Consumer sales & other service	Refiners of solvents & oils	Attend Air Quality & Environment Forum at the PCB
38	Gud Holdings (Pty) Ltd - Filpro Division	Manufacturing	Manufacturing and marketing of oil, air and fuel automotive filters.	Recycling & reuse Waste management Attend Air Quality & Environment Forum at the PCB
39	Hulett Containers	Manufacturing	Aluminium foil and aluminium foil containers	Attend Air Quality & Environment Forum at the PCB
40	Hulamin	Manufacturing	Aluminium products	Pollution & Waste management post; Occupational Health & Safety post Emergency &Evacuation procedures Waste Classification Air Quality monitoring Energy &natural resources conservation Environmental audits Recycling & reuse of aluminium Attend Air Quality & Environment Forum at the PCB
41	Midlands Oil	Retail	Lubricants and solvents/shell	Attend Air Quality & Environment Forum at the PCB

42	Willowton Oil & Cake Mill	Manufacturing	Oils, soaps, candles, margarine, fatty acids	Pollution & Waste management post; Occupational Health & Safety post Emergency & Evacuation procedures Environmental audits Recycling & reuse of oils, soaps, candles, margarine, fatty acids Attend Air Quality & Environment Forum at the PCB
43	BSI Group/Discount Steel	Consumer sales & other services	Steel merchants	Attend Air Quality & Environment Forum at the PCB
44	Cousins Steel cc.	Manufacturing	Structural steel specialists	Occupational Health & Safety post Emergency & Evacuation procedures
45	M.T.S.A (Pty) Ltd	Manufacturing	Cements for iron & steel industry	Occupational Health & Safety post Emergency & Evacuation procedures
46	MNM General Engineering Supplies cc.	Consumer sales & other services	Suppliers of pipes, fittings, valves, steel, gasketing material and chemicals.	Attend Air Quality & Environment Forum at the PCB
47	Rogue Steel PMB cc	Manufacturing	Steel merchants	Occupational Health & Safety post Emergency & Evacuation procedures Air Quality & Environment Forum
48	Somta Tools	Manufacturing	Manufacture engineers high speed steel and carbon cutting tools.	Occupational Health & Safety post Emergency & Evacuation procedures Air Quality & Environment Forum
49	Span Africa Steel Structures	Manufacturing	Fabricate and supply industrial and agricultural steel structures	Occupational Health & Safety post Emergency & Evacuation procedures Air Quality & Environment Forum
50	SYD Mills Manufacturing	Manufacturing	Steel fabrication & steel fencing etc	Occupational Health & Safety post Emergency & Evacuation procedures Air Quality & Environment Forum
51	T&M Engineering Services	Manufacturing	Engineering: structural steel work & pipe fabrication	Occupational Health & Safety post Emergency & Evacuation procedures Air Quality & Environment Forum
52	Thina Sonke (Pty) Ltd	Manufacturing	Steel products/welding/steel fabrication	Occupational Health & Safety post Emergency & Evacuation procedures Air Quality & Environment Forum
53	Trotech Engineering (Pty) Ltd	Manufacturing	Structural steel/tanks	Occupational Health & Safety post Emergency & Evacuation procedures Air Quality & Environment Forum

