

**THE CHALLENGE OF IMPLEMENTING INTEGRATED
ENVIRONMENTAL MANAGEMENT WITHIN AN
ORGANISATIONAL STRUCTURE:
THE CASE OF THE ENVIRONMENTAL SECTION
IN
DRAKENSTEIN MUNICIPALITY**

Aalia Ahmed

*Thesis presented for the requirements for the degree of Master of Philosophy in
Environmental Management in the Faculty of Economic and Management
Sciences at Stellenbosch University*



Supervising Professor: Kobus Muller

March 2016

DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

March 2016

Copyright © 2016 Stellenbosch University

All rights reserved

ABSTRACT

This study aims to investigate the current level of integration experienced by Drakenstein Municipality's Environmental Management section. The study has three objectives: (1) identifying and discussing the different Integrated Environmental Management (IEM) approaches, objectives and principles, (2) reviewing IEM in Drakenstein Municipality and (3) analysing their documentation, goals, human resources and processes/procedures.

Literature has provided a variety of successful practices with regards to IEM. It has provided knowledge with regards to the types of integration, integrating tools as well as the principles of IEM. A variety of authors have also researched the possible degrees of integration ranging from partial integration to full integration running on a linear scale. Organisational design and structure has been acknowledged to have an impact on the degree of integration achieved within an organisation, some organisational design and structures are thus more suitable to achieve full integration than others. There is a strong legislative background regarding IEM in South Africa. Both National and Provincial policies and forums encourage integration efforts in the country.

To illustrate the above mentioned IEM ideas and theories, Drakenstein Municipality's Environmental Management Section was used as a case study in which the degrees of integration will be determined based on documentation, goals, human resources and processes/procedures of the Section as well as other relevant sections identified because the environmental problems are not just the responsibility of this Section, but requires a collaborative effort between all Sections whose operations are affected by the environment. The findings from the research illustrates that currently the municipality has partial integration. It is recommended that a planning methodology for strategic integration needs to be implemented to replace the current operational integration and people orientated integration. It was also found that for integration to increase in the Section integration needs to occur throughout the municipality due to its holistic nature.

The most important contribution of this study is to help the Drakenstein Municipality's Environmental Management Section identify the current integration level with regards to environmental matters in the municipality and providing recommendations to increase

integration if necessary. The theoretical contributions, findings, recommendation and future research are discussed in this thesis paper.

OPSOMMING

Hierdie studie het ten doel om die huidige vlak van integrasie te ondersoek in Drakenstein Munisipaliteit se Omgewingsbestuurafdeling. Die studie het drie doelwitte: (1) die identifisering en bespreking van die verskillende benaderings, doelwitte en beginsels van Geïntegreerde Omgewingsbestuur (GO), (2) hersiening van GO in Drakenstein Munisipaliteit en (3) analisering van die organisasie se dokumentasie, doelwitte, menslike hulpbronne en prosesse/prosedures.

Die literatuur voorsien 'n verskeidenheid suksesvolle praktyke in terme van GO. Dit verskaf insig oor die verskillende tipes integrasie, integrasie hulpmiddels beskikbaar sowel as die beginsels agter GO. 'n Verskeidenheid skrywers het reeds die verskillende vlakke van integrasie probeer navors wat wissel tussen gedeeltelike integrasie tot volle integrasie op 'n lineêre skaal. Die ontwerp en struktuur van 'n organisasie speel wel 'n rol in die vlak van integrasie wat bereik word, sekere organisatoriese ontwerpe en strukture is meer geskik om volle integrasie te bereik as ander. Daar is 'n sterk wetgewende agtergrond omtrent GO in Suid-Afrika. Nasionale sowel as provinsiale beleide en forums moedig integrasie pogings sterk aan in Suid-Afrika.

In 'n poging om die bogenoemde GO idees en teorieë te illustreer was Drakenstein Munisipaliteit se Omgewingsbestuurafdeling gebruik as gevallestudie waar die verskillende vlakke van integrasie vasgestel word op grond van dokumentasie, doelwitte, menslike hulpbronne en prosesse/prosedures van hierdie afdeling sowel as ander relevante afdelings, aangesien omgewingskwessies nie net hierdie afdeling se verantwoordelikheid is nie, maar wel 'n gesamentlike poging tussen al die afdelings wie se bedrywighede 'n impak mag hê op die omgewing.

Die bevindings van hierdie navorsing illustreer dat die Munisipaliteit huidiglik gedeeltelike integrasie uitvoer in hul werksaamhede. Daar word voorgestel dat 'n beplanningsmetodologie vir strategiese integrasie geïmplementeer moet word om die huidige operasionele en mensgerigte integrasie te vervang. Daar was ook gevind dat integrasie regdeur die Munisipaliteit moet geskied weens sy holistiese aard alvorens dit kan verbeter in die omgewingsbestuurafdeling.

Die belangrikste bydrae van hierdie studie is om Drakenstein Munisipaliteit se Omgewingsbestuurafdeling te help om die huidige vlakke van integrasie met betrekking tot

omgewingsake te identifiseer en om aanbevelings te maak oor hoe integrasie verbeter kan word waar nodig. Die teoretiese bydrae, bevindings, aanbevelings en toekomstige navorsing word bespreek.

ACKNOWLEDGEMENTS

I would like to thank the Almighty for blessing me in abundance, all glory to Him.

I would like to express gratitude my parents and brother for their unconditional love, support and motivation throughout my studies.

My supervisor for his support and guidance throughout the year and within this study; Drakenstein Municipality, the Environmental Management section and its staff as well as all the other sections that were interviewed for granting me the opportunity to use their resources so that I may complete my thesis.

And last, but not least to my boyfriend and friends for all their love and motivation.

TABLE OF CONTENTS

ABSTRACT	III
OPSOMMING	V
ACKNOWLEDGEMENTS	VII
ABBREVIATIONS	XV
LIST OF FIGURES	XVI
LIST OF TABLES	XVI
ANNEXURES	XVI
CHAPTER 1	1
INTRODUCTION	1
1.1 INTRODUCTION	1
1.2 ENVIRONMENTAL MANAGEMENT IN SOUTH AFRICA	3
1.3 INTEGRATED ENVIRONMENTAL MANAGEMENT	4
1.3.1 Principles and tools of IEM	6
1.3.2 Principles of Integrated Environmental Management.....	6
1.4 GOVERNMENT STRUCTURE IN SOUTH AFRICA	7
1.4.1 South African Constitution (1996)	7
1.4.2 National Environmental Management Framework	8
1.4.3 Problem Statement.....	9
1.5 RESEARCH DESIGN	11
1.5.1 Empirical Studies	11
1.5.2 Types of empirical study designs	11
1.5.3 Non-empirical research.....	14
1.5.4 Non-empirical research designs	14
1.6 RESEARCH METHODOLOGY	15
1.6.1 3 Key elements/variables.....	15

1.6.1.1. Human resources	16
1.6.1.2. Goals and documentation	16
1.6.1.3. Processes.....	16
1.6.2 Degrees of integration	16
1.6.3. Structured interviews.....	18
1.6.4. Simple observations	18
1.7 ETHICAL CONSIDERATIONS.....	20
1.7.1 Data and research integrity	20
1.7.2 Consent.....	20
1.7.3. Observational research	20
1.7.4. Protection of participants	21
1.7.5 Confidentiality	21
1.8 CONCLUSION.....	21
1.9 LIMITATIONS OF THE STUDY.....	23
1.10 CHAPTER OUTLINE.....	23
CHAPTER 2.....	25
2.1 INTRODUCTION.....	25
2.2 COORDINATION	27
2.2.1 Six internal coordination variables	27
2.2.1.1. Scope of coordination	27
2.2.1.2. Position	28
2.1.2.3. Boundary	28
2.1.2.4. Authority.....	28
2.1.2.5. Information	29
2.1.2.6. Process	29
2.3 FRAGMENTED ORGANISATIONS.....	30
2.3.1. Sources of fragmentation.....	31
2.3.1.1. Policies, plans, programmes or strategies.....	31
2.3.1.2. Vertical and horizontal integration	31
2.3.1.3. Specialisation and knowledge	32

2.4	TYPES OF INTEGRATION	33
2.4.1	Reactive, preventative or proactive	33
2.4.2	Internal integration	33
2.4.2.1	Internalisation	34
2.4.3	External integration	35
2.4.3.1	Regionalisation	35
2.5	DEGREES OF INTEGRATION	37
2.6	FACTORS FOR SUCCESSFUL PRACTICE	40
2.6.1	Initiation	40
2.6.2	Operation.....	41
2.6.3	Outputs and outcomes.....	41
2.7.	MEANINGS OF INTEGRATION	42
2.7.1.	Integration through information	42
2.7.2.	Integration governance	42
2.7.3.	Integrated planning and management	42
2.7.4.	Integration amongst assessment tools	42
2.7.5	Principles of IEM.....	43
2.7.6.	No simple solution	44
2.8	INTEGRATION INTO DECISION MAKING	44
2.8.1	Integrated Development Plan	44
2.8.2	Spatial Development Framework.....	45
2.8.3	Environmental Management Framework.....	46
2.8.4	Strategic Environmental Assessment.....	46
2.8.5	Environmental Impact Assessment.....	47
2.8.6	Environmental Management Systems	47
2.8.7	What is an EMS?	48
2.9	ORGANISATIONAL DESIGN AND STRUCTURE.....	50
2.9.1	Three components of organisational structure	50

2.9.1.1	Complexity	50
2.9.1.2	Formalisation.....	52
2.9.1.3	Centralisation	53
2.10	ORGANISATIONAL DESIGN	54
2.10.1	Simple structure.....	54
2.10.2	Machine bureaucracy	54
2.10.3	Professional bureaucracy	55
2.10.4	Divisional structure	55
2.10.5	Adhocracy.....	56
2.11	CONCLUSION.....	58
CHAPTER 3.....		59
3.1	INTEGRATED ENVIRONMENTAL GOVERNANCE IN SOUTH AFRICA .	59
3.1.1	Definition of cooperative governance	59
3.1.2	Definition of intergovernmental relations	60
3.2	INTERNATIONAL CONTEXT.....	60
3.2.1	Agenda 21	60
3.3	THE SOUTH AFRICAN CONTEXT	64
3.3.1	National sphere	64
3.3.3	Local sphere	65
3.4	THE CONSTITUTION (1996)	66
3.4.1	Section 24: Bill of Rights	66
3.4.2	Chapter 3: Co-operative government	67
3.5	INTERGOVERNMENTAL RELATIONS FRAMEWORK ACT	68
3.6	IGR STRUCTURES IN SOUTH AFRICA	70
3.6.1	National Assembly	70
3.6.2	National Council of Provinces	71
3.6.3	Presidents Coordinating Council	71
3.6.4	MinMECs	73

3.6.5	Premiers Coordinating Forum	73
3.6.6	District Mayor’s Forum	74
3.6.7	Forum for South African Director’s General (FOSAD)	74
3.7	NATIONAL ENVIRONMENTAL MANAGEMENT ACT	75
3.7.1	Principles	76
3.7.2	Committee for Environmental Coordination	77
3.7.3	Environmental Implementation Plans and Environmental Management Plans	77
3.7.4	Cooperative governance in NEMA	78
3.8	MUNICIPAL SYSTEMS ACT	80
3.9	CONCLUSION	82
	CHAPTER 4	83
4.1	INTRODUCTION	83
4.1.1	Location context	83
4.1.2.	Environmental Management section	85
4.1.3.	Interview methods	85
4.1.4.	Other observations	86
4.2	FINDINGS	87
4.2.1	Documents	88
4.2.1.1.	Findings	88
4.2.2	Goals	89
4.2.2.1.	Findings	89
4.2.3	Human resources	90
4.2.3.1.	Findings	90
4.2.4	Processes	91
4.2.4.1.	Findings	91
4.2.5	Meeting observations	92
4.2.5.1.	Environmental Management Committee	93

4.2.5.2. Natural Resource Reference Group	93
4.2.5.3. Findings	94
4.3 EVALUATION.....	95
4.3.1 Coordination in Drakenstein Municipality	95
4.3.2 Type of IEM in Drakenstein Municipality	98
4.3.2.1. Reactive, preventative or proactive	98
4.3.2.2. Internal.....	99
4.3.2.3. External.....	99
4.3.3 Factors for successful practice.....	100
4.3.3.1. Initiation.....	100
4.3.3.2. Operation	101
4.3.3.3. Outputs and outcomes	101
4.3.4 IEM tools in Drakenstein Municipality	102
4.3.4.1. IDP.....	102
4.3.4.2. SDF.....	103
4.3.4.3. EMF.....	104
4.3.4.4. SEA.....	105
4.3.4.5. EIA.....	105
4.4 CONCLUSION.....	106
CHAPTER 5.....	108
5.1 INTRODUCTION.....	108
5.2 DRAKENSTEIN MUNICIPALITY ORGANISATION STRUCTURE AND DESIGN	108
5.2.1. Complexity	108
5.2.2. Formalisation.....	109
5.2.3. Centralisation	109
5.2.4. Machine Bureaucracy	110
5.2.5. Adhocracy	112
5.3 DRAKENSTEIN MUNICIPALITY DEGREE OF INTEGRATION	112
5.4 REASONS FOR FRAGMENTATION.....	115

5.4.1. Documents and plans	115
5.4.2. Scope of vertical and horizontal lines.....	116
5.4.3. Specialisation and knowledge.....	116
5.5 AIM AND OBJECTIVES	117
5.5.1. Integration.....	117
5.5.2. Documentation.....	117
5.5.3. Human resources.....	118
5.5.4. Processes.....	118
5.5.5. Goals	119
5.5.6. Matrix structure	120
5.6. CONCLUSION	122
5.7 RECOMMENDATIONS.....	123
5.7.1. A culture if integration	123
5.7.2. Strategic methodology for integration.....	123
5.7.3. Matrix structure	123
5.8 FUTURE RESEARCH.....	124
REFERENCES.....	125
ANNEXURE 1: STRUCTURED INTERVIEW QUESTIONS.....	132
ANNEXURE 2: SCHEDULE 4 OF THE CONSTITUTION	134
ANNEXURE 3: SCHEDULE 5 OF THE CONSTITUTION	136
ANNEXURE 4: PRINCIPLES OF COOPERATIVE GOVERNANCE	137
ANNEXURE 5: SCHEDULE 1 OF NEMA.....	138
ANNEXURE 6: SCHEDULE 2 OF NEMA.....	138
ANNEXURE 7: STANDARD OPERATING PROCEDURE.....	139
ANNEXURE 8: ORGANOGRAM OF THE PLANNING AND ECONOMIC DEPARTMENT	140
ANNEXURE 9: ORGANOGRAM OF THE ENVIRONMENTAL MANAGEMENT	141

ABBREVIATIONS

CEC – Committee for Environmental Coordination
DPLG- Department of Provincial and Local Government
DPSA – Department of Public Service Administration
EIA – Environmental Impact Assessment
EIP – Environmental Implementation Plan
EMC – Environmental Management Committee
EMF – Environmental Management Framework
EMP – Environmental Management Plan
EMT – Executive Management Team
FOSAD – Forum for South African Directors General
IDP – Integrated Development Plan
IEM – Integrated Environmental Management
IGR – Intergovernmental Relations
IGRFA – Intergovernmental Relations Framework Act No 13 of 2005
KFA – Key Performance Area
KPI – Key Performance Indicators
MinMEC – Ministers and Members of Executive Councils
NCOP – National Council of Provinces
NEC – National Executive Council
NEMA – National Environmental Management Act No 107 of 1998
NRRG – Natural Resource Reference Group
PCC – Presidents Coordinating Council
PMO – Project Managers Office
RSA – Republic of South Africa
SALGA – South African Local Government Association
SDBIP – Service Delivery and Budget Implementation Plan
SDF - Spatial Development Framework
SEA – Strategic Environmental Assessment
SOP – Strategic Operating Procedure

LIST OF FIGURES

- Figure 1.1: Degrees of integration
- Figure 4.1: Drakenstein Municipality Location Map
- Figure 5.1: Organisational structure
- Figure 5.2: Divisionalised structure design
- Figure 5.3: Matrix structure
- Figure 5.4: Matrix structure including the PMO

LIST OF TABLES

- Table 1.1: IEM principles
- Table 4.1: List of officials interviewed
- Table 4.2: Observation schedule
- Table 4.3: Observation schedule
- Table 4.4: Evaluation of coordination variables
- Table 4.5: Evaluation of 3 variables
- Table 5.1: Levels of integration

ANNEXURES

- Annexure 1: Structured interview questions
- Annexure 2: Schedule 4 of the Constitution
- Annexure 3: Schedule 5 of the Constitution
- Annexure 4: Principles of Cooperative Governance
- Annexure 5: Schedule 1 of the National Environmental Management Act No 107 of 1998
- Annexure 6: Schedule 2 of the National Environmental Management Act No 107 of 1998
- Annexure 7: Standard Operating Procedure
- Annexure 8: Organogram of the Planning and Economic Department
- Annexure 9: Organogram of the Environmental Management section

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

“[E]nvironmental problems are rarely the responsibility of any one agency, organisational unit or individual; the problems usually require a collaborative effort among numerous entities, to achieve collective goals” (Margerum and Born, 2000:6). Integrated Environmental Management (IEM) strives to address the complex problems of environmental management through a more holistic, inter-connective and effective approach. Integration of environmental problems is a complex situation due to the many disciplines within the environmental management field. Environmental disciplines include air quality, noise control, waste management, biodiversity management, water management and pollution control. The environment has a social component in which people affect the environment and the environment affects people and hence the environment has a social component; the environment can also affect the economy as a whole in which the small negative cumulative effects on the environment could cause an economic crisis. For example, the misuse of water could lead to drought which has an effect on the agriculture sector, and on a macro scale could affect imports and exports. Proper management of our environment is thus very important for all of us. It is crucial that the environment is managed to address all these worrisome problems and try to prevent and mitigate all negative impacts where possible. The environment is thus all encompassing and includes the natural, social and economic environment of everyday life.

Referring to the above mentioned statement by Margerum and Born (2000:6), Integrated Environmental Management as a goal is a necessity to achieve a collaborative effort amongst numerous entities to achieve a collective goal. Integrated Environmental Management is the umbrella under which all environmental efforts need to fall under because it is all inclusive and has the potential to achieve the overarching objective of creating collaborative efforts and setting collective goals for the management of our environment. For the purpose of this study Integration will be assessed in the setting of the Drakenstein Local Municipality (referred to as Drakenstein Municipality). A local municipality was chosen to be the case study because implementation happens at the lower sphere of government, it's mandate extends to implementing the plans of National and Provincial government in South Africa. Drakenstein

Municipality is fortunate enough to have a dedicated Environmental Management Section to protect and manage the natural locale in the municipality. This Section and their efforts for integration will be the focus of this study, the study does not focus on how to implement Integrated Environmental Management (IEM), but rather identify whether IEM is implemented in the municipality based on the literature review of integration and findings.

The remainder of this chapter will briefly introduce the concepts and give a systematic review of the topic; this is followed by a problem statement, research goal and objectives. This study consists of five chapters. Chapter 1: Introduction introduces the concept of IEM and provides a brief indication of the concepts to be discussed further in the study. Chapter 2: Literature Review: Operationalising Integrated Environmental Management looks at the literature behind integration in organisations and IEM. Chapter 3: Literature Review: Integrated Environmental Governance in South Africa looks at the legislative background regarding integration and IEM in South Africa from an International, National, Provincial and Local Municipal level. Chapter 4: Findings and Evaluation presents the findings of the interviews done with selected officials in Drakenstein Municipality's Environmental Management Section as well as other relevant Sections. It then evaluates the findings in terms of the interviews, literature review and legislative background with regards to IEM. Chapter 5: Conclusion identifies the organisational design and structure as well as the level of integration in Drakenstein Municipality. It states if and how the aim and objectives of the study was achieved and whether or not the municipality is integrated. Recommendations are then made if necessary followed by a list of limitations experienced during the study and future research suggestions.

1.2 ENVIRONMENTAL MANAGEMENT IN SOUTH AFRICA

The environment is defined in the National Environmental Management Act No 107 of 1998 as:

- “...the surroundings within which humans exist and that are made up of –
- i. the land, water and atmosphere of the earth;
 - ii. micro-organisms, plant and animal life;
 - iii. any part or combination of (i) and (ii) and the interrelationship among and between them; and
 - iv. the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being” (Republic of South Africa (RSA), 1998).

South Africa relies heavily on the natural goods and services, renewable and non-renewable natural resources that ecosystems provide us with. Therefore the environment is an essential component for the well-being of the people in the country especially for those who live in the informal sectors; they have a direct impact on the natural resources and are more heavily dependent on it (Middleton, Goldblatt, Jakoet and Palmer, 2011:3). Some examples of the dependence on the environment in South Africa include the dependence on natural renewable water (rivers and streams), the dependence on biomass like wood and other plant materials which the rural populace use to cook with, heating, as well as plants and marine resources for food and medicine (Middleton *et al.*, 2011:3). Non-renewable benefits provided from the environment include recreational opportunities, aesthetic, cultural and spiritual value. All these pressures that are exerted on the natural goods and services coupled with whether they are renewable or non-renewable resources cause our environment to change; as the population grows the need for resources grows too. To prevent it from becoming depleted in terms of existence and quality environmental management needs to step in.

The objective of environmental management is to improve the quality of life in society. It involves the mobilisation of resources and the role of government to regulate the use of both natural and economic goods and services. It is based on the principles of ecology. It uses systems analysis and conflict resolution to distribute the costs and benefits of development activities throughout the affected populations and seeks to protect the activities of development from natural hazards. Conflict identification is one of the more important tasks

in environmental management planning and the resolution of conflicts is a fundamental part of what makes up environmentally sound development (Minimum Conflict: Guidelines for planning the use of American Humid Tropic Environments, 1987).

In South Africa, the government is committed to protecting the country's rich biodiverse heritage for the benefit of all, and creating a prosperous and equitable society that lives in harmony with its natural resources (Environment, 2015). The Department of Environmental Affairs is mandated to formulate, coordinate and monitor the implementation of environmental policies, programmes and legislation through the 3 spheres of government. The department aims to:

- protect, conserve and enhance the environment, and natural and heritage assets and resources;
 - plan, manage and prevent pollution and environmental degradation to ensure a sustainable and healthy environment;
 - provide leadership on climate change adaptation and mitigation;
 - contribute to sustainable development, livelihood and job creation;
- contribute to a better Africa and a better world by advancing national environmental interests through a global sustainable development agenda (Environment, 2015).

1.3 INTEGRATED ENVIRONMENTAL MANAGEMENT

Integrated Environmental Management (IEM) is a paradigm for sustainable development in that sustainable development provides the context for IEM in that it requires “the need to integrate social, economic and environmental features” (Republic of South Africa, 2004:5). IEM broadly integrates the objectives of sustainable development into the development processes of organisations. On a narrower scale it's the integration of possible environmental effects into processes and projects so that they may be mitigated and these processes and projects can be carried out in a sustainable manner.

Integration refers to integrating environmental considerations into the project life-cycle, integrating knowledge, stakeholders and appropriate tools. Environment refers to the broader areas in which we find the biophysical, social and economic components that we aim to integrate. Management refers to planning, implementing and controlling an activity or group to achieve integration.

According to Margerum (1999:151-152) IEM is a response to natural resource management, which has been reactive, disjointed and limited, he also states that IEM is made up of four substantive elements:

- Environmental regions need to be managed holistically
- It is a holistic approach, hence considers the entire system and not just elements thereof
- It acknowledges interconnections
- It is goal orientated and is strategic in that analysis and planning is done towards implementation at an early stage.

Margerum (1999:151) also further states that IEM in action is a diverse group of stakeholders that come together and in this manner a holistic approach to environmental decision-making can be made.

With regards to the South African context, there is some conflict regarding IEM and how the philosophy is interpreted. It is often confused with the EIA tool in that both aim to “resolve or mitigate any negative impacts and to enhance positive aspects of development proposals” (Republic of South Africa, 2004:8). It is important to understand that EIA is not IEM in itself, but merely a tool to achieve IEM. IEM has evolved from this narrow definition published in the first IEM guidelines in 1992, and is now understood as a mechanism for co-operation and coordination amongst governmental departments and an adoption of the NEMA principles across and within government. With this evolution came a broader perspective and it now provides a way of thinking that can be used for integrated planning vertically and horizontally within an entire organisation. A variety of tools and principles are associated with this broader definition and will be discussed in this study.

IEM can be now be defined as a

[H]olistic framework that can be embraced by all sectors of society for the assessment and management of environmental impacts and aspects associated with each stage of the activity life cycle, taking into consideration a broad definition of environment and with the overall aim of promoting sustainable development. (Republic of South Africa, 2004:2).

1.3.1 Principles and tools of IEM

There are a variety of tools that assist and inform stakeholders involved in decision-making on how to align their endeavours with the principles of IEM and ultimately sustainable development. The principles listed below are derived from the government document titled “Overview of Integrated Environmental Management” which forms part of the IEM Management Information Series published in 2004. These principles can be supported by the tools also listed in this document.

1.3.2 Principles of Integrated Environmental Management:

Table 1.1: Principles of IEM

Principles	Brief definition
Accountability	Accountability of all stakeholders
Adaptive	Processes should be flexible and adapt to realities
Alternative options	Identify all relevant alternatives
Community Empowerment	Promote knowledge and awareness
Continual Improvement	Enhancing the overall environmental performance
Dispute Resolution	Aim to minimize conflicts
Environmental Justice	Impacts should not unfairly discriminate
Equity	Equitable access to resources
Global responsibility	Due consideration should be given to this
Holistic decision-making	Take into account all parties and knowledge
Informed decision-making	Appropriate methods and techniques applied
Institutional co-ordination	Harmonisation of policies, legislation
Integrated approach	Environmental management must be integrated, acknowledge all elements
Polluter pays	Those responsible must pay the price
Rigour	Appropriate techniques and experts
Stakeholder agreement	Meaningful and timely engagement
Sustainability	Resources used should be declined
Transparency	Decisions should be open and transparent

Source: Summers, 2013

The tools listed below are only those assumed to be important to the Drakenstein Municipality's case, further research might prove otherwise and it is of course subject to change. The choice of the tools appropriate to an organisation should be based on the context, needs of the stakeholders, requirements of NEMA and the hierarchy of the activity being undertaken. The tools relevant to Drakenstein Municipality are the Integrated Development Plan (IDP), Spatial Development Framework (SDF), Environmental Management Framework (EMF), Strategic Environmental Assessment (SEA), Environmental Impact Assessment (EIA) and an Environmental Management Framework (EMF).

These tools, along with the principles of IEM, coordination variables, types of IEM, factors for successful practice, degrees of integration as well as organisational design will be presented in Chapter 2, thus presenting a theoretical background on integration.

1.4 GOVERNMENT STRUCTURE IN SOUTH AFRICA

The South African government is made up of three spheres, namely the National, Provincial and Local Municipal spheres of government. The National and Provincial spheres in terms of environmental management are more committed to wide ranging goals for the management and protection of the environment and overall for sustainability, many of which will require action and implementation at the local level (Middleton *et al.*, 2011:2). There is a diversity of legislation that encourages integration in terms of the environment across all three spheres of government. For the purpose of this study the focus will be on the role of local government in terms of integrated environmental management. There are two overarching legislative documents that need to be implemented by the local municipalities with regards to environmental management. Namely, The Constitution (RSA, 1996) (now the highest order in all legislation) (previously known as Act 108 of 1996) and the National Environmental Management Act (NEMA) 107 of 1998 (RSA, 1998).

1.4.1 South African Constitution (1996)

The overarching legislation with regards to IEM would be Section 24 (a) of the Bill of Rights in the South African Constitution (RSA, 1996) that states that everyone has the right to:

- a) 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. (RSA, 2004b:6).

According to Rossouw and Wisemen (2004:132) an environmental right is enshrined in the Constitution which means that the State is obliged to protect the environment for the benefit of present and future generations. Chapter 3 in the Constitution refers to cooperative governance which refers to integration efforts between the three spheres of government. Hence, the Constitution takes cognizance of the environment and of integration being implemented throughout the three spheres (RSA, 1996).

1.4.2 National Environmental Management Framework (Act 107 of 1998) (NEMA)

“NEMA is a framework law providing overarching principles for sustainable development that apply to all activities of the State ... [it] also provides for co-operative governance structures and networks, as well as integrated environmental management” (Rossouw and Wiseman, 2004:135). Section 23 in NEMA speaks to the objectives of IEM. To summarise the objectives in Sections 23, it mentions the importance to promote integration of the principles in all integrated decision making, to identify the impacts on the environments and also options for mitigating them, to ensure that the effects of activities are adequately considered before action is taken, to provide the opportunity for public participation, to consider environmental attributes in management and decision-making and to employ modes best suited to the principles of environmental management (RSA, 1998). NEMA also makes provisions for forums that initiate integration in terms of human resources as well as documents such as the Committee for Environmental Coordination (CEC), Environmental Implementation Plans (EIP) and Environmental Management Plans (EMP). Chapter 5 in NEMA gives effect to cooperative governance and promotes the integration management of activities (RSA, 1998).

On a local level, a municipality also has its own legislation that relates to environmental governance. The IDP which is empowered by the Local Government: Municipal Systems Act 32 of 2000 (RSA, 2000), is a tool that should be used to integrate environmental issues into the different sections in the municipality because “it has legal status and supersedes all other

plans that guide development at local government level” (Integrated Environmental Management in the Drakenstein Municipality, 2012:18). The Municipal Systems Act (RSA, 2000) applies to local municipalities and in Section 3 of Chapter 2 it states that municipalities need to exercise their power in relation to cooperative governance, meaning they need to operate in coordination with the other 2 spheres of government.

The environment is a complex and dynamic space and is a nexus of widely ranging and often conflicting social, economic and environmental interests. IEM requires understanding and management of the environment at a national and provincial level, but more importantly at a local level.

Antonopoulos, I.S. *et al.*, (2009:1687) did a study that looks at developing a holistic approach for integrated waste planning within municipal planning and stated that “[Local authorities] maintain a key position in supporting sustainable development but the often segmented local approach to problem solving is frequently proven to be inadequate when it comes to designing and implementing large-scale projects”. These segmented approaches to problem solving and even decision making regarding environmental issues can be fixed through better integration practices. But to be able to fix the segmentation, in other words, the fragmentation, Antonopoulos, I.S. *et al.*, (2009: 1690) states the need to identify and assess the abilities and attitudes that a [local authority] must have to step up in operational and environmental performance. For the purpose of this study a degrees of integration table will be used to benchmark current IEM practices within Drakenstein Municipality’s Environmental Management Section.

1.4.3 Problem Statement

Environmental management is expanding and fusing with concepts such as sustainability, the triple bottom line and corporate governance. It is also fusing with other disciplines such as engineering, town planning, heritage, waste management, economics and social sciences. This expansion of environmental management creates and motivates the need for integration practices in the operational approach to environmental management.

Due to this expansion and fusion, even the legislative competence is fragmented and the administrative distribution of function becomes even more complex due to a wide range of government departments at national and provincial level that might cause overlapping

mandates and interests. Government departments continue to operate in their traditional silos, thus they remain wedded in their own narrow objectives and networks. If there is no central coordination, within a municipality or between the three spheres of government then the mechanisms to resolve conflicts, make better informed decisions and problem solving, remains weak (Cowell & Martin, 2003:160).

The fragmented approach to problem solving and decision-making with regards to environmental management due to the growing scope of environmental management which affects the three spheres of government in that it makes functions and implementation thereof more complex coupled with government departments working in silo's creates the need to assess IEM.

Local government is the lowest level of government and is the level on which most implementation happens. It can thus be considered as the level where integration happens as all the mandates and interests of national and provincial governments trickle down and now need to be implemented. Therefore integration within a local government is considered important to achieve a holistic approach to IEM in South Africa. IEM is required by law as will be discussed and therefore governments should aim to practice it, because better coordination is a fundamental building block for better environmental management (Margerum& Born, 2000:13).

Therefore, the research aim for this thesis is to:

Explore Integrated Environmental Management on a local level in Drakenstein Municipality, as it is practiced in the Environmental Management Section, and identify opportunities to improve integration for environmental management.

This aim will be achieved through the following objectives:

- Identifying and discussing the different integration approaches, objectives and principles
- Reviewing IEM in Drakenstein Municipality by analysing their documentation, goals, human resources and processes/procedures
- Make recommendations on how to improve integration for environmental management.

Design classification	Empirical	Hybrid data
	Textual and numeric data	Medium control
Strengths	Establishing rapport and trust with research subjects, high construct validity, insider perspective. The collaborative and participatory nature of this design minimizes suspicion and distrust.	
Limitations	The naturalistic forms of inquiry make it difficult to evaluate the outcomes of the evaluation systematically and rigorously.	

Content Analysis		
Definition:	Studies that analyse the content of texts or documents.	
Design classification	Empirical	Secondary data
	Textual data	Low control
Strengths	It is considered an unobtrusive method, which means that errors associated with the interaction between researchers and subjects are avoided.	
Limitations	Authenticity of the data sources, representativeness of texts analysed which makes the overall external validity of the findings limited.	

Other empirical research designs include:

- Participatory research/action research
- Surveys
- Comparative, cross-sectional and cross-national studies
- Experimental designs, including field experimental designs
- Implementation evaluation
- Experimental and quasi-experimental outcome studies
- Statistical modeling and computer stimulation studies
- Secondary data analysis
- Textual analysis, hermeneutics, textual criticism
- Discourse and conversational analysis
- Historical studies
- Life history methodology
- Methodological studies

The above mentioned empirical research designs were not found suitable to achieving the research aims and objectives.

The first objective is to identify and discuss the different integration approaches, objectives and principles. This can be achieved through the content analysis design. Even though content analysis design classification is secondary data, the secondary data analysis design

would not be suitable because it is described as “using existing data (mostly quantitative) ... to reanalyse such data in order to test a hypothesis or to validate models” (Mouton, 2013:164), which is not the case in this study because there is no hypothesis or models to validate.

The second objective is to review IEM in Drakenstein Municipality by analyzing their documentation, goals, human resources and processes/procedures. For this objective, a participatory observation study design will be used during the monthly Environmental Management Committee and quarterly Natural Resource Reference Group meetings which will inform the role of human resources in integration practices, as well as whether the current processes/procedures of integration are successful or not. A qualitative evaluation research design will be used with regards to the processes/procedures practiced in terms of integration efforts in the environmental management section of the municipality. An experimental research design, a quasi-experimental research design nor a non-experimental research design was considered because they are classified as quantitative research designs. An experiment will not be conducted in this study and no testing will be done, but more specifically a formative evaluation, which is considered a qualitative design, will be done because feedback will be provided on how to improve IEM in the municipality.

When it comes to interviews, a snowball effect will be used by arranging an appointment with the environmental manager of the municipality and enquiring about other relevant officials whom need to be addressed. The interview will include exploratory, descriptive, casual and theoretical questions based on achieving the objectives of the study. The structured interviews would help achieve the second objective.

A content analysis approach will be used to reach this objective as well due to the fact that documentation will need to be analysed. Implementation (process) evaluation studies would also be a suitable research design in that it aims “to answer the question of whether an intervention (programme, therapy, policy or strategy) has been properly implemented, whether the target group has been adequately implemented and whether the intervention was implemented as designed” (Mouton, 2013: 158). However, it is unclear whether the environmental management section in Drakenstein Municipality actually has an implementation strategy for IEM, and hence this research design was not used.

Other non-empirical research designs include:

- Theory building or model building studies
- Philosophical analysis

With regards to the research objectives, the literature review and conceptual analysis research design will be used with regards to identifying and discussing the different integration approaches, objectives and principles. Conceptual analysis can also be used when reviewing the documentation in the municipality. Neither a model nor a new theory was designed or tested, IEM was not analysed in terms of an argument against or for it and therefore the theory building, model building and philosophical research design were found not to be appropriate for this study.

The study is being done in the natural environment of the municipality. It will focus on the process of achieving IEM by getting an insider perspective and in-depth understanding of how the municipality aims to achieve IEM, from there the focus will be on which resources are important for the study. Overall an evaluation research study will be done to explain the IEM practices in the municipality with formative evaluations which can be given as feedback to the municipality on how they can improve their operational approach and organisational design in term of IEM. Majority of the research will be qualitative and at this stage no quantitative data will need to be analysed.

1.6 RESEARCH METHODOLOGY

1.6.1 3 Key elements/variables

A study was done by Bernardo, Casadesus, Karapetrovic and Heras (2009) with the aim of analysing to which extent EMS were integrated and implemented in organisations. As part of their methodology they identified 3 main elements on which to base their information on. The elements are namely human resources, goals and documentations and processes/procedures. The study focused on integration based on the EMS, they identified that 3 elements of human resources, goals and documentation and processes/procedures to categorise their information. Due to the fact that this study is also based on exploring integration efforts, the same three categories will be used to categorise the findings.

1.6.1.1. Human resources

Human resources manage integrated environmental management and therefore according to Bernardo *et al.*, (2009:745) it is “important to know to which point the human resources involved are integrated or not”. Human resources are also important for establishing a culture of integration and are present at all levels of integration. The different level of responsibilities associated with the human resources had an influence on the level of integration achieved, for example, managers have a bigger role to play, and influence than operational staff.

1.6.1.2. Goals and documentation

Goals and documentation referred to “whether or not the organisations integrated the goals (policy and objectives) and the documents (manuals, procedures, instructions and records)” (Bernardo *et al.*, 2009:745). Integrated policy-making will be addressed under goals and documentation.

1.6.1.3. Processes

Processes referred to “the extent to which processes were integrated” (Bernardo *et al.*, 2009:745). Integrating these 3 variables is a step in the right direction. These 3 variables will be used as the 3 themes in which integration will be assessed in Drakenstein Municipality in relation to the environmental management section. Integrated decision-making and coordination structures such as the EMC and NRRG meetings will be addressed under processes.

1.6.2 Degrees of integration

Current level of integration efforts happening in the Environmental Management section of Drakenstein Municipality is unknown. The degrees of integration table will be used as a means to determine the current situation of integration in the municipality. Degrees of integration were identified from existing literature and leading authors in the field. The degrees of integration was simplified by classifying it into four levels, namely no integration (level 0) to complete integration (level 3) which can be seen in figure 1.1 below.

The degrees from the different authors are all presented on a linear scale, they start at a point of no or little integration and end once complete integration has been achieved, and thus all the authors have the same goal. The terms used across the linear model are similar. All the words under level 0 can be interchanged; the same can be said throughout levels 1, 2 and 3.

Karapetrovic (2003:8) speaks of partial integration which he states is more common than full integration and ranges from simple collaborations to alignment and harmonization of objectives, processes and resources. Karapetrovic (2003:7) also mentions vertical and horizontal integration in organisations.

Beckmerhagen, Berg, Karapetrovic, Willborn, (2003:214) also speaks of partial harmonisation and states that it's the least stringent degree of integration in terms of coordinating organisational documents. The next step would be to combine systems or processes used and “[f]inally, in a full integration, management systems are amalgamated...” (Beckmerhagen *et al.*, 2003:214).

Pojasek (2006:91) uses the combination approach to achieve integration, whereby an organisation must first combine systems, documents or goals that were separate, then find common elements and integrate them and then incorporate all those elements into one system (Pojasek, 2006:90).

Jorgensen, Remmen and Mellado (2006), explains achieving integration in a similar manner. The first step towards integrating an organisation system or process is by correspondence, meaning “increased compatibility with cross-references between parallel systems” (Jorgensen *et al.*, 2006:714). The next step is to create generic processes, which is finding a “common understanding of the processes of coordination within an organization” (Jorgensen *et al.*, 2006:716). The final level of integration is strategic and coherent, fosters an organisational culture of learning and provides for continuous improvements and stakeholder involvement (Jorgensen *et al.*, 2006:718-719). Only the Karapetrovic, Beckmerhagen, Pojasek and Jorgsen were looked at because Seghezzi, Wilkinson and Dale, Kirkby and Karapetrovic were thought to be a bit outdated but can be looked at for future research.

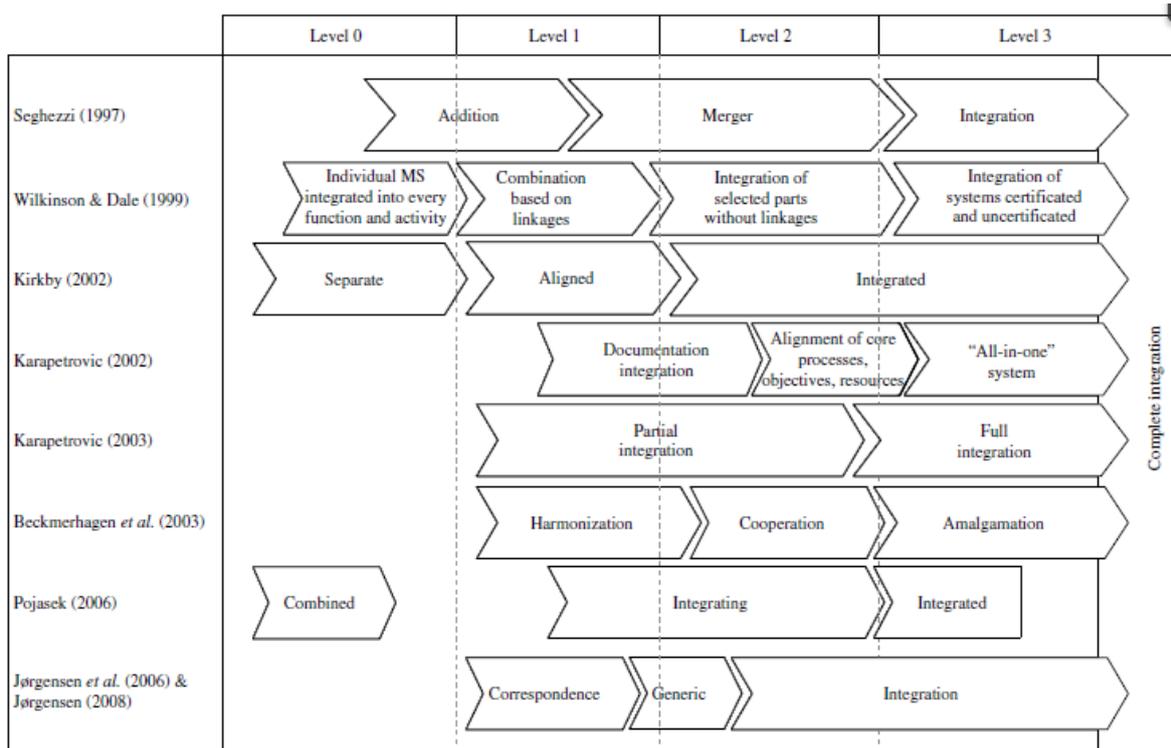


Figure 1.1: Degrees of integration

Source: Adopted from Bernardo *et al.*, 2009:744

1.6.3. Structured interviews

The study is being done in the natural environment of the municipality. It will focus on the process of achieving IEM by getting an insider perspective and in-depth understanding of how the municipality aims to achieve IEM, from there the focus will be on which resources are important for the study. Due to the study taking a qualitative approach, the main methods of gather data would be through essential individual interviews, observations and identifying and explaining documentation.

When it comes to interviews, a snowball effect will be used by arranging an appointment with the environmental manager of the municipality and enquiring about other relevant officials whom need to be addressed. The interview will include exploratory, descriptive, casual and theoretical questions based on achieving the objectives of the study. See Annexure 1 a list of the questions asked during the interviews.

1.6.4. Simple observations

The municipal Environmental Management Section (where interviews and observations will take place) has monthly Environmental Management Committee meetings and quarterly

Natural Resource Reference Group meetings with key internal and external stakeholders. These meetings have the potential to be the basis for a good coordinating effort in terms of IEM in relation to the successful practices identified by Margerum (1999:162), namely that “stakeholders need to create structures and mechanisms for coordinating decision-making” and “major stakeholders should be willing to participate in a collaborative planning effort”. The monthly and quarterly meetings will result in data that will be very subjective. Simple observations will be done during these meetings. These observations will add value and understanding to the context of IEM in the municipality. Specifically a participant observation study will be done to allow for an inside perspective of these meetings and the stakeholders involved.

Overall, if integration is not successful there are three mechanisms that need to be put in place.

- The first mechanism is interaction because “it helps achieve the substantive objects of IEM ... [and] can produce networks, social capital and political will, which are necessary to put an integrated approach into operation” (Margerum, 1999:152).
- Looking at above mentioned degrees of integration the second mechanism should be coordination. Coordination is defined by Margerum and Born (2000:7) when “participants must first develop a common base of understanding which develops by using the same information, sharing analysis and comparing goals and objectives”. Hence, coordination and not cooperation wherein entities work together to achieve their individual goals.
- Lastly, the mechanism likely to achieve coordination is networks that encourage interaction and coordination in a formal manner (Muller, 2004:402).

Chapter 4 will look at the findings and evaluation of the information collected during interviews, analysis of documentation and discuss it in context of the municipality and the 3 themes (Human resources, goals and documentation and processes). Chapter 5 will take the findings and evaluation into account and determine which level of integration Drakenstein Municipality is currently experiencing with regards to the Environmental Management Section and its operations and why. Recommendations will be suggested afterwards if necessary to improve the level of integration.

1.7 ETHICAL CONSIDERATIONS

It is my overarching responsibility as a researcher to protect the rights and dignity of all my research participants and to ensure quality data and integrity of my research.

1.7.1 Data and research integrity

Data and research integrity will be ensured by asking questions that are related to the research topic to participants that are adequately able to answer these questions. Therefore the participants need to be representative of the Environmental Management Section in Drakenstein Municipality; hence staff members within this Section will be interviewed.

Integration happens across the all Sections as well and therefore staff members from different Sections that are invited to attend the Environmental Management Committee meetings and Natural Resource Reference Group meetings will also be interviewed. Essential individual interviews and straightforward observations were chosen as the suitable instrument for the collection of research data. Data collection will be recorded through hand written notes. Additional data items will be requested from the participants include any planning, management plans or documents related to the Environmental Management Section. Only documents that are available to the public will be used as data to ensure that no privacy is breached. Participants will be allowed to review the data collected which provides them with the opportunity to change or withdraw data and detect errors without any negative consequence.

1.7.2 Consent

Consent forms will be handed out to the selected participants wherein they will be informed about the study and what will be expected from them and are given the opportunity to ask any questions. Upon signing of the consent form participants are confirming that they are willing to participate in the research project and that they understand the nature of the study. At any given time that the participant feels uncomfortable or threatened during the interview he/she has the right to withdraw from the research process without any negative consequences.

1.7.3. Observational research

As a researcher the privacy of the participants should not be violated, therefore consent will be obtained from the participants present at the Environmental Management Committee meetings and Natural Resource Reference Group meetings with regards to simple

observations being done at these meetings. As the researcher, meeting will be attended with an open mind and be sensitive to the cultural differences and academic disciplines of the participants in these meetings so that no participant will be discriminated against or judged.

1.7.4. Protection of participants

Interviews will be conducted during the day in a location where the participants are most comfortable within the municipal building, whether it be their office or a conference room that has been booked in advance. Interviews will be conducted in the municipal building because it is convenient for the participants as well as for the researcher. Interviews will be done individually and kept anonymous to protect the participant from any judgment or criticism. Interviews will also be held in scheduled time slots to avoid interference with their working schedule. As a researcher it is my responsibility to ensure that the participant feels comfortable at all times, to pay attention to all data collected during the interviews, to ensure that the participant feels encouraged to participate and use the data collected to add value to the research acquired.

1.7.5 Confidentiality

Participants will be given the opportunity to read and sign a consent form before the start of the interview, the participant will be notified that the information given will be reflected in the study, and if they wish not to be mentioned in the study this wish will be respected. Only the researcher will have access to password protected files saved on a laptop and Google accounts profile. Back-ups will be made to an external device and kept in a safe location only the researcher is aware of. Any paper documents will be kept in a personal file in a safe location.

1.8 CONCLUSION

IEM provides a set of principles and tools that are aimed at promoting sustainable development. The ideal context would be having integration of human resource, goals and documentation and processes within the municipality at all levels of a project life-cycle, across all sections and accompanied by the willingness of stakeholders to be involved in the process. However, not all organisations decide to integrate their systems, sections or decision-making. “The level of integration that an organization decides to pursue ... will depend on both the complexity of its current management system(s) and on the motives of the

organization to pursue integration” (Jorgensen *et al.*, 2006:717). According to Jorgensen *et al.* (2006:717) organisational size, structure and demand will also play a decisive role.

The municipality will have to decide between vertical or horizontal (linear) integration and full and partial integration. According to Karapetrovic (2003:7) vertical integration is probably the approach of choice for small businesses. Thus, horizontal (linear) integration would suit the municipality’s organisational structure better, because of its vertical lines of management it is not considered a small business and therefore linear integration would be better. Full integration on the other hand means that systems will lose their unique identity which results in amalgamation (Karapetrovic, 2003:7). However, some organisations might not require full integration and hence decide to be partially integrated. An example of partial integration would be when an organisation only focuses its integration on the top and bottom levels (Karapetrovic, 2003:7). If partial integration is decided on by the top management and functional managers then the systems, sections and decision-making should be harmonized, mutually compatible and follow a common structure with clear links (Beckmerhagen *et al.*, 2003:218).

Overall, whether Drakenstein Municipality has full or partial integration, vertical or horizontal (linear), the study will focus on the internal integration being practiced by the Environmental Management Section in the municipality. The integration approaches, objectives and principles as well as the relevant legislation will be discussed. The goals and objectives, human resources, documentation and the processes will be reviewed and analysed then placed on a model adopted from figure 1.1 above to determine the degree of integration in the municipality. Once this has been done, recommendations will be suggested if necessary.

1.9 LIMITATIONS OF THE STUDY

- There is no unit to measure integration and therefore the findings of this research are subjective.
- It is challenging to identify whether documents are integrated on paper as well as in practice.
- Only 30 minutes were allocated for interviews due to time constraints of the interviewees.
- Executive Managers were not available for interviews due to training and busy schedules, hence only Middle Line Managers were interviewed.
- Time constraints to research and write the thesis due to working full time as an intern at Drakenstein Municipality.
- Difficult to quantify how many times integration has actually taken place and the way that it occurred at the time. Therefore the evaluations are subjective.

1.10 CHAPTER OUTLINE

CHAPTER 1: Introduction

CHAPTER 2: literature review

- Introduction
- Coordination
- Fragmented Organisations
- Types of IEM
- Factors for successful Practice
- Integration tools
- Degrees of integration
- Organisational structure and Design
- Conclusion

CHAPTER 3: Integrated Environmental Governance in South Africa

- Introduction
- International context
- South African context
- The Constitution
- Intergovernmental Relations Framework Act
- Intergovernmental Relations structures

- NEMA
- Municipal Systems Act
- Conclusion

CHAPTER 4: Evaluation and Findings

- Introduction
- Findings
- Evaluation
- Conclusion

CHAPTER 5: Conclusion

- Introduction
- Drakenstein Municipality organisational structure and design
- Drakenstein Municipality degree of integration
- Reasons for fragmentation
- Aim and objectives
- Recommendations
- Limitations of this study and future research

CHAPTER 2

LITERATURE REVIEW: OPERATIONALISING INTEGRATED ENVIRONMENTAL MANAGEMENT

2.1 INTRODUCTION

Integration “is generally understood as combining separate parts into a whole” (Beckmerhagen, Berg, Karapetrovic and Willborn, 2003:214) and thus “previously conflicting objectives should somehow become mutually interdependent” (Cowell and Martin, 2003:177). Bernardo *et al.* (2009:743) provides a summary of various authors and their interpretations on integration.

- According to Bernardo *et al.* (2009: 743) Garvin defines integration as the degree of alignments or harmony in an organisation – whether different departments and levels speak the same language and are tuned to the same wavelength.
- According to Bernardo *et al.* (2009:743) Beckmerhagen’s *et al.*, (2003) definition of integration is a process of putting together different function-specific management systems into a single and more effective IMS.
- According to Bernardo *et al.*(2009:743) Karapetrovic and Willborn’s findings summarise integration as a set of interconnected processes that share a pool of human, information, material, infrastructure, and financial resources in order to achieve a composite of goals related to the satisfaction of a variety of stakeholders and
- lastly Bernardo *et al.*(2009:743) states that Posajek (2006) sees integration as a genuinely integrated system that is one that combines management systems using an employee focus, a process view, and a systems approach, that makes it possible to put all relevant management standard practices into a single system.

To add to the definitions mentioned above Margerum (1999:152), states that there are four substantive elements to Integrated Environmental Management.

- The first element is to consider a holistic approach to the entire system. Holistic management “allows companies to share human, material, informational and financial resources ...” (Almeida, Domingues and Sampaio, 2014:339) especially because it involves a broad range of stakeholders issues that tend to be complex and taking a

holistic approach allows for adaptation and mutual adjustment of the group addressing the issues through IEM.

- Secondly, IEM acknowledges interconnections. It strives to address complex problems not only through a holistic approach but through an inter-connective and effective approach as well (Margerum and Born, 2000:5). When applying an IEM system it reflects the complexities and interconnectedness of environmental issues and the systems used to address these issues in an organisation (Margerum, 1999:164). These interconnections are necessary for the alignment of efforts and priorities of the diverse stakeholders present (Lane and Robinson, 2012:22), because through interconnections the stakeholders identify the efforts and priorities, they can identify which are aligned or need to be aligned to achieve IEM and through this the workload and the chance of duplication is condensed.
- Thirdly, IEM is goal orientated. It applies certain processes and approaches to attain the environmental goals defined through the interconnections formed (Lane and Robinson, 2012:16) and on a broader scale IEM itself is a process and an approach to attain these goals. The sharing of information and knowledge through the incorporation of diverse stakeholders and coordination among them lead to the acknowledgement of the policies, programs and projects of IEM efforts which brings us to the fourth element of focusing analysis early to identifying plans towards implementation.
- Coordination has the benefit of giving description of the responsibilities, the examination of synergies and trade-offs and the alignment of policies, objectives and targets (Jorgensen *et al.*, 2006:721), hence an early analysis. With regards to planning for implementation it is important to note that IEM requires continuous improvement to contribute to sustainable development.

Integration is defined in various forms, hence to get a holistic view of the definition of integration the various definitions and understandings thereof should be integrated itself. Keywords from the above definitions indicate that IEM is a holistic system that through processes and approaches gathers a pool of information from various stakeholders in different functions, through applying interconnectedness and coordination to identify interdependent goals and objectives to the issues of environmental management which need to be executed.

2.2 COORDINATION

According to Margerum (1999:152) interaction is “the key operational component” of IEM. Interaction within an organisation allows for a diverse array of knowledge, perspectives and information to be communicated through various networks, and political will that can introduce social capital into achieving an integrated approach to operations. Greater integration is thus achieved through interaction that by definition includes “participation by the public and coordination among stakeholders” (Margerum and Born, 2000:5). Thus a key operational element of IEM should rather be stakeholder coordination.

Coordination is a common understanding of the generic processes of policy, planning, implementation, action and management (Jorgensen *et al.*, 2006:721). It describes the synergies and trade-offs, alignment of policies, objectives and targets. Environmental problems usually require collaborative efforts among various sections in an organisation. Coordination, according to Margerum and Born (2000:6) is thus an important variable to achieve integration. According to Jorgensen *et al.* (2006:716) internal coordination is the first step to achieve IEM. Internal coordination is the practice of interdependent decision-making from relevant stakeholders within an organisation, in other words, the key employees in various sections will identify common objectives, goals and operational methods for the organisations environmental management. Margerum and Born (2000:9-12) have identified and modified six variables to describe the structure and process of internal coordination.

2.2.1 Six internal coordination variables

2.2.1.1. Scope of coordination

The first of the rules refer to the scope of the coordination. This refers to the range of concerns that the key stakeholders have to deal with such as organisational policies, management plans, auditing procedures, standard operation procedures, etc. It entails the operational elements or concerns that environmental management has to address while integrating all these elements from different sections in the organisation. Integration of the elements or concerns is necessary to achieve a collaborative effort to decision-making from the stakeholders present. The second and third rules are position and boundary correspondingly.

2.2.1.2. Position

Position refers to the stakeholders involved in the coordination effort and the roles that each one plays. Coordination needs to be managed in a systematic way to be successful and hence a process must be established to collectively deal with the environmental task (Margerum and Born, 2000:7). Key stakeholders represented have to be invited or chosen in a systematic way as to bring the best in the various fields, and those relevant to environmental management to participate in the coordination of environmental activities.

2.1.2.3. Boundary

This brings us to boundaries which is the manner in which stakeholders leave and enter the positions they have been assigned to. Stakeholders can be nominated, invited or appointed to a specific discussion depending on the expertise required on a specific topic. They can also be nominated or ranked in terms of their relevance or importance in the discussion based on their expertise and the topic being discussed. For example, on a matter regarding pollution control wherein a sewerage pipe has burst and now flows into a natural area, depending on the source of pollution, either the waste manager or the air quality control officer will have a bigger influence on the discussion than the other. In this incident the waste manager's opinion or knowledge would be more valued than that of the air quality officer. However, the air quality officer should not be excluded from the discussion because it is a concern relevant to his/her field of expertise as well in that air quality, although temporary is affected by the incident due to the odour emitting from the burst.

2.1.2.4. Authority

Authority is the fourth rule in the structure and process of coordination. It is the extent to which authority is imposed on the stakeholders. This links with the position that the stakeholders, based on the concern and their expertise, more relevant to a situation are more highly ranked than those whose area of expertise it is not. On the other hand, there might be an overall environmental management manager in the organisation who would take on the role of chairperson (if nominated to do so) in these coordination efforts and thus has more authority than the stakeholders.

2.1.2.5. Information

Information is the fifth rule and refers to the content that the stakeholders exchange to make better decisions. It is important to have the relevant stakeholders present so that the most effective information can be exchanged. Hence, top management are preferred to participate in these coordination efforts in that they have an overall view of the operations in their sections. However, technicians should not be excluded from decision-making if issues are discussed relevant to their line of work in that they can contribute information from a “hands on” point of view.

2.1.2.6. Process

The last rule in the structure and process of coordination is the process in which decisions are made, either from a general consensus, voting process, unanimity, super majority, simple majority or plurality process (Margerum and Born, 2000:11). How the stakeholders reach their decision is valuable for evaluating coordination efforts and the success thereof (Margerum and Born, 2000:12). When decisions are made by voting, the boundaries of the issue (across sections) are broadened or remain the same depending on the success of the coordination.

In summary, the scope is determined by the environmental issues in the organisation, position, boundary and authority depend on stakeholders affected by the environmental issue. Information is collected from all stakeholders whether they are experts in the issue or not, having an “outsider” perspective is an advantage and the decision-making is relevant to determine the success of coordination.

Better coordination however, does not guarantee successful integration but only makes it more likely. The six variables discussed above are what organisation should consider when they seek to improve their structure and process of coordination. The application of these variables depend on the nature and structure of the organisation itself, with specific reference to the willingness of the organisation and its resources to change and participate in integration efforts. Coordination is a “solution to problems related to managing tasks and projects across different functional units and departments” (Jorgensen *et al.*, 2006:721). Coordination efforts are seen as means to an end rather than an outcome and any interaction in the organisation should be done through coordinating efforts to achieve effective integration in environmental management.

A link can be made between integration and coordination. They can be understood as having the same characteristics. Both collect a pool of information from different sections; both encourage interaction between different actors. Coordination can be used as a means to align policies, plans, programmes and strategies among various sections and therefore is a means to IEM.

2.3 FRAGMENTED ORGANISATIONS

Any organisation can implement an IEM. Although the context of these organisations differ, the findings identified can be utilised to inform organisation who wish to implement IEM in future. So why do these organisations seek to implement IEM? “Integration has emerged as the antithesis of fragmentation” (Lane and Robinson, 2012:16), due to implementation gaps, congested decision-making, conflict, displacement of responsibility and duplication, organisations seek to implement a solution to the chaos of fragmentation. The environment is understood as encompassing the natural, social and economic environments. Multiple managements and approaches have emerged over the years resulting in a plethora of policies, plans, programmes, strategies, etc. within the environmental management sphere to address this triple bottom line. These policies, plans, programmes and strategies result in multiple resources, values, jurisdictions, tenures, agendas and agents which vary across multiple scales and make up the wicked problems of environmental planning (Lane and Robinson, 2012:16-17).

The wickedness of these problems is only exacerbated through fragmentation. Lane and Robinson (2012:18) list the wickedness enhanced by fragmentation of environmental management as follows:

- Multiple environmental planning approaches instead of a coherent strategy.
- Multiple environmental policies and actions instead a whole-of-landscaped plan.
- Good environmental management undermined by management pursuing contradictory objectives.
- Increased duplication and therefore cost of environmental management.
- Multiple actors operating in overlapping zones, creating the conditions for increasing conflict.

- Cost and responsibility shifting between and within formal and informal institutions.
- Lack of coordination between governments, and between governments, communities, NGO's and markets.

Policy integration is the “highest” mechanism for achieving integration in that whichever policies are put forward by the highest level of government (the national sphere in South Africa); have to be trickled down to be implemented by the lowest sphere of government (the local sphere, municipalities in South Africa). The gap between the top and lower levels of government has the power to influence the list of wicked problems mentioned above as policies might be misinterpreted and implemented in the unintended manner. Three additional sources of fragmentation enhancing the wickedness are discussed.

2.3.1. Sources of fragmentation

2.3.1.1. Policies, plans, programmes or strategies

First, the overarching policies for environmental management provides problems towards the implementation of IEM as the policies, plans, programmes or strategies themselves tend to be fragmented as well as the implementation thereof. An example of such a policy or legislation could be the National Environmental Management Act (107 of 1998) (RSA, 1998) (the main Act). This is the overarching framework Act with regards to environmental management in South Africa. However, there are various National Environmental Management Acts underneath the “main” Act. Namely, the National Environmental Biodiversity Act (10 of 2004) (RSA, 2004a) and the National Environmental Air Quality Act (9 of 2004) (RSA, 2004c). When implementing the separate NEMA Acts, it is challenging and requires human resources and time to implement them in coordination with each other. And hence, fragmentation occurs in the management of the environment. This lack of integration leads to the ineffective implementation of the legislation and management that is not integrated.

2.3.1.2. Vertical and horizontal integration

Vertical and horizontal integration proves to be a challenge and when not achieved can lead to fragmented outputs, outcomes and decision-making (Lane and Robinson, 2012:17). Vertical integration in South African management of the environment refers to the three spheres of government. Hence, any policy, plans, programmes, strategies need be in

coordination with each other. Vertical integration refers to integration and coordination between the top to lower levels of management. Horizontal integration refers to integration between the different departments within an organisation. It can be extended towards external stakeholders in the form of public participation. In environmental management, public participation is crucial to incorporate in any policies, plans, programmes or strategies to give effect to the Constitutional right to an environment that is not harmful to human health or wellbeing.

Both vertical and horizontal integration occur on linear scales, between different levels of management and occur when two or more departments have the same, similar or overlapping tasks to complete. Fragmentation occurs through poor vertical and horizontal integration when interested and affected parties are not informed and thus not included in decision-making. This results in a lack of resources and information in the formulation of policies, plans, programmes or strategies.

2.3.1.3. Specialisation and knowledge

Another source of fragmentation is specialisation and knowledge within an organisation. Those who have specialised roles within an organisation tend to work exclusively rather than inclusively (Lane and Robinson, 2012:17). They tend to remain isolated and within smaller groups concerned with one particular issue. This doesn't allow for effective communication and interaction which hinders the opportunity to discuss potentially overlapping issues within different sections of the organisation. This leads to the issues of boundary crossing which is a fragmentation issue as a result of having to tackle issues which cross boundaries, sections or even specialisations without a centre to give clear strategic directions or mechanisms communicated to resolve potential conflict between these boundaries, sections or even specialisations (Cowell and Martin, 2003:160). The attitudes of staff need to change and a culture for coordination needs to be established.

By attempting to implement IEM, organisations have to reflect on the constraints and complexities as well as the need for integration within. Integration occurs on both internal and external levels of the organisation which results in its complex nature. This complex nature can be addressed through interconnectedness and coordination. The need for integration arises from the causes of fragmentation discussed. These causes of fragmentation

are not widespread but hinder the implementation of IEM, therefore fragmentation needs to be addressed to achieve IEM.

2.4 TYPES OF INTEGRATION

This section aims to explain the “types” of integration found in organisational structures and work processes not only in environmental management. It can also be understood as a means to achieve integration within an organisation, because these “types” can be implemented as mechanisms or broad approaches of implementing integration in an organisation.

2.4.1 Reactive, preventative or proactive

Overall, organisations can decide whether to take a reactive, preventative or proactive approach to IEM. Reactive refers to the adaptation to environmental concerns that have already occurred. Preventative refers to preventing environmental concerns from occurring, and proactive refers to anticipating future environmental concerns and incorporating them into the organisations objectives. It is thus considered a strategic approach to environmental management. Each of these reactions to concerns depends on the maturity of the organisation in relation to the environment. Companies less concerned with environmental concerns are inclined to take a reactive approach; those concerned with the environmental due to the fact that it might impact on the market of the organisation take a preventative approach. Once organisations have developed an ethical approach to the environment a proactive approach will be implemented.

2.4.2 Internal integration

Internal integration occurs when an “environmental variable is integrated into the company’s productive practices and processes and considered to be an activity of the production function” (Jabbour and Santos, 2006:46). When this occurs, usually environmental departments are introduced into the organisation whose aim is to react to the environmental concerns or pressures from environmental legislation. They usually result in limited integration as the environmental objective of the department is not included in the long-term goals and objectives of the organisation and environmental issues are internalised in these departments. This means that even though other departments might encounter environmental concerns, they are not required to directly deal with it. Hence environmental objectives are only prominent in the environmental department and not the entire organisation. However, a solution to this problem of internalisation is matrix integration of environmental

management. This is still an internal approach to environmental management but allows for the integration of related departments to the environmental department. In this manner environmental concerns are spread across the organisation and integrated on a horizontal level. The various departments approach the environmental department for guidance concerning their environmental issues.

Internal integration can also be referred to as internalisation. Decision-making, problem solving and implementation are internalised in the organisation to include as many sections and dimensions as possible to be able to produce an ordered and systems response to environmental concerns (Lane and Robinson, 2012:19). The importance of including external stakeholders and the value of their input is diminished in this approach; hence the organisation only produces a partial response to the problem. Internalisation creates boundaries and fails to adequately address problems that should be the subject of public debate.

2.4.2.1 Internalisation

Internalisation entails the analysing of policies and documents, goals and objectives and human resources within an organisational structure. Documentation analysis refers to analysing the relevant policies and documents to environmental management. There has to be an internal coherence between these documents which show strong potential for vertical and horizontal integration within the organisation. Analysing these documents can be done through overlapping. The goals and objectives within each department should reflect in the overlapped policies and documents. Common goals and objectives can also be derived from this overlapping. This approach can assist organisations in identifying whether they need to focus integration on a strategic level (where structural changes take place) or operational level (where implementation happens) (Cowell and Martin, 2003: 167). To achieve any integration, a study done by Cowell and Martin (2003), mentions the importance of having reticulists whom are “engaged and powerful individuals with common interest on specific issues” (Cowell and Martin, 2003:172). These individuals are essential for successful implementation of IEM in that their ideas and attitudes can strongly influence the outcomes. The human resource component of environmental management should not be underestimated; they can either become an organisations biggest threat (causing fragmentation) or its greatest potential asset (Jabbour and Santos, 2006:50). With regards to governance, by internalising environmental management policies and documents, governments will need to consider the

external policies and documents of the other spheres of government as well to ensure a coherent management of the environment. Internalisation thus accounts for a more focused approach towards the environment, but it is hindered by the fact that integration with stakeholders outside of the organisation is not accounted for.

2.4.3 External integration

External integration happens when environmental issues go beyond one functional area within an organisation and infiltrates the different levels both vertically and horizontally. The major difference between internal integration and external integration is that integration happens within and most importantly, outside of an organisation. Environmental issues are thus spread across geographical boundaries and the tiers of government. With regards to a local municipality this entails when environmental issues overlap two or more local municipalities or districts. Environmental issues thus become external and strategic. It is considered as strategic, because the issues are now integrated into the overall business strategy due to organisations having adopted an ethical view to the environment (Jabbour and Santos, 2006:53). External integration is implemented to ensure access to external markets or functional areas, to improve relationships with external stakeholders (interested and affected parties) thus, it allows for increased public participation in environmental decision-making. It allows for a diverse group of experts to communicate with one another and hence produces dynamic and innovative opportunities and solutions to environmental concerns. Overall, external integration accounts for a holistic approach to addressing environmental issues and allows the integration of top level strategies (within an organisation and outside of it) into lower level strategies.

2.4.3.1 Regionalisation

An example of external integration is regionalisation; this refers to integration outside of the organisation, in this case government. It “presumes that downscaling governance reduces political and institutional complexity and fragmentation” (Lane and Robinson, 2012:19). It entails having environmental groups in each region that are responsible for the implementation of environmental management and solving relevant issues. As a result of the spatial component of this approach, regionalisation poses problems with regards to horizontal integration in that integration has to be done over a wider scale and hence, increases complexity. Having these regionalised groups also adds another level to governments (provincial, national, regional and local) and increases complexity to vertical integration

efforts. According to Lane and Robinson (2012:19) this approach was adopted in Australia under its Natural Resource Management regions and has proven to be complex, expensive and a time consuming task.

Another example is the decentralisation of governance it “is a means of improving the effectiveness, efficiency and democracy of government” (Lane and Robinson, 2012:18).

It refers to the restructuring of authority so that there is a system of co-responsibility between institutions of governance at the central, regional and local levels according to the principle of subsidiarity, thus increasing the overall quality and effectiveness of the system of governance, while increasing the authority and capacities of sub-national levels (Rondinelli and Cheema, 2003:196).

Co-responsibility in this instance can be understood as referring to coordination between the institutions of governance in the country through the principle of subsidiarity which is “an organising principle of devolving decisions to the lowest practical level” (Subsidiarity and its protection of Agency Part 1, 2014).

With regards to environmental management, decentralisation states that local governments are able to make better informed decisions on an operational level, this result in power sharing between national and local government, inclusion of the private and public sectors and promotes good governance (Rondinelli and Cheema, 2003:197). Decentralisation is positive with regards to stakeholder inclusion in decision-making, but is criticized for simplifying complex problems and thus failing to understand and discuss cross-complex concerns. Top government structures, although away from operationalisation, have a bird’s eye view of the situation and are hence, more aware of differing alternatives to a problem and have a strategic role to play in terms of addressing these intricate problems. For this reason the two levels of government (lower level and top level) need to communicate with one another to first, understand the “ground” level to utilise this information to inform decision-making at top levels. Even through decentralisation, top level government still holds power to enforce frameworks for policies, plans, programmes or strategies towards management of the environment which lower level governments have to implement within their own operations, hence decentralisation is not completely decentralised.

The level of integration depends on the level of development within an organisation with regards to environmental management. Organisations or government structures (more specifically local government) are more likely to imply internal integration if the environment is merely seen as another department whose aim is to manage and ensure that concerns are resolved. On the other hand, organisations or governmental structures that aim to instil environmental values throughout its structure are inclined to adopt external integration within the organisation as well as external integration with relevant stakeholders. External integration is thus considered a more effective form of integration because it also accounts for internal integration as well and thus applies a more holistic approach towards environmental management.

2.5 DEGREES OF INTEGRATION

It's safe to say there is no unique model for IEM implementation in organisations, but there are however degrees of integration that can be used to assess whether the approaches used by an organisation to achieve integration are efficient or not. The degree of integration that the organisation wants to achieve depends on the nature of the organisation itself (Bernardo *et al.*, 2009:744). Degrees of integration are identified to understand to what extent the resources, goals and processes are integrated. Resources refer to “human resources and specialised skills, internal infrastructure, technology and financial resources” (Bernardo *et al.*, 2009:745). Goals or objectives can be identified as “something sought or aimed for” (Bernardo *et al.*, 2009:745), and processes are a “set of interrelated or interacting activities which transforms inputs and outputs” (Bernardo *et al.*, 2009:745). The integration of these variables are affected by the conditions, strategies and requirements of the organisation (Beckmerhagen *et al.*, 2003:214). Degrees of integration can range from level 0 to level 3 as discussed below.

Once the above three variables have been evaluated, they can be placed on a linear scale to determine their degree of integration. According to a study done by Bernardo *et al.*, (2009:749-780), level 0 integration is when there is no integration between the variables, level 1 integration is seen to be the initial level of integration and is where integration of documentation resources, record control, management review and resources management occur. In level 2 integration organisations have integrated policies, objectives and manuals the most, and level 3 is achieved when organisations have integrated all of the above. Figure 1.1 represents the different degrees of integration from Karapetrovic, Beckmerhagen, Pojasek

and Jorgensen. All the degrees run across a linear scale with the same starting point of no integration and same end point of full integration, thus anyone of these degrees of integration theories can be used to determine the degrees of integration in an organisation. Only the last four degree theories were chosen for the purpose of this study as they are contemporary and the theories cover varies degree approaches.

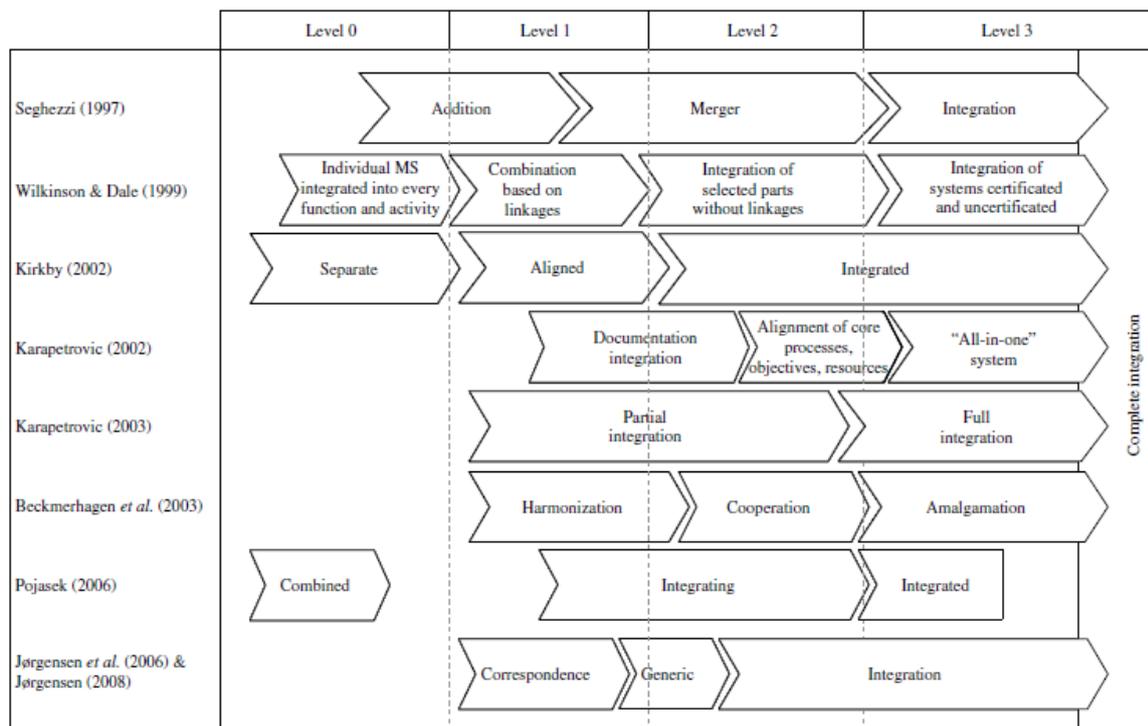


Figure 1.1: Degrees of integration

Source: Bernardo et al. (2009:744)

According to Beckmerhagen *et al.* (2003:214), degrees of integration can be divided in three degrees namely, harmonisation, cooperation and amalgamation. These can then be grouped into two overarching degrees namely, partial integration and full integration. Partial harmonisation and cooperation are the least stringent degree of integration. Full integration is complete amalgamation of the resources, documents and processes. Organisations that are committed to contributing to sustainable development have already, in some way or another assigned employee with different responsibilities in the organisation (Jørgensen *et al.*, 2006:722) to achieve this, hence even business who don't require registration should harmonise their operations. A good approach would be to start with harmonisation of documents, such as manuals, procedures and instructions followed by increased cooperation and then amalgamation (Beckmerhagen *et al.*, 2003:217). Full integration depends on the

levels of the organisation. Some larger organisations like government structures might only require full, if not partial integration at top level management and bottom level management only.

Jorgensen *et al.* (2006:713) on the other hand also speaks of the levels of integration. For the purpose of this study, we will refer to the levels in this segment as degrees if not otherwise specified. This author states that there are three degrees of integration. Firstly, corresponding which is the increased compatibility with cross-references between the differing sections in an organisation. “[M]aking cross-references can reduce the add-on problems of different parallel [documents], [resources] or [policies] in one organisation” (Jorgensen *et al.*, 2006:716). Compatibility, cross-reference and internal coordination all fall under the correspondence umbrella. The second degree of integration is a generic focus on processes of coordination. The generic aspects of management refer to “policy, planning, implementation, corrective action and management review” (Jorgensen *et al.*, 2006:716). Hence, the generic process elements of effective coordination have to be extended to the differing sections in an organisation and integrated into their documents, resources and policies. The outcome would entail focused interrelations, establishment of interrelated objectives and a centre point for decision-making and problem solving. The final degree is complete integration. The ideal would be an organisation which is strategic and coherent with an established culture of learning, continuous improvement and stakeholder involvement (Jorgensen *et al.*, 2006:714).

Pojasek (2006:90) adopts degrees of integration from the British Standards Institute which defines the progression of integration. First an organisation would start with a combined approach wherein the organisation identifies the separate documents, goals and policies in the organisation that are being used at the same time. These separate entities are then analysed to find common elements amongst them, this is referred to as intergratable, and once the common elements have been identified they are integrated. The intergratable and integrated step is the second degree of integration called integrating. The final degree, integration, is achieved when all the common elements are combined.

Overall, taking into consideration the theories discussed on the degrees of integration, there are 2 main degrees; partial integration and full integration. “Partial integration which is more common, can range from simple collaboration to alignment and harmonisation of objectives, processes and resources ...” (Karapetrovic, 2003:8). Full integration is achieved when

documents, goals and policies lose their unique identities and become completely amalgamated into one system (Karapetrovic, 2003:7). The degrees that range from level 0 till 2 can be considered as partial integration as it entails the harmonisation, cooperation, correspondence, and understanding of generic processes that are combined and aligned with one another. Level 3 entails integration and amalgamation and the introduction of a new organisational culture. It is important in any stage of implementing integration for the organisation to bear in mind the nature of its operations. The degrees of integration are useful for determining the current position of the organisation and how far it needs to go in terms of achieving full integration be that the final goal.

2.6 FACTORS FOR SUCCESSFUL PRACTICE

This segment of the paper aims to describe the factors needed to achieve better integration based on successful practices from a study by Richard Margerum (1999), in which 23 case studies were looked at in the United States and Australia. Based on an assessment of these studies, it was identified what he termed the “foundations of successful practice” for achieving integration. Although the studies do not directly relate to a government environment, the foundations identified can still be applied to government and are discussed below. The foundations will be referred to as factors from here on.

According to Margerum, (1999:154) the factors to achieve successful implementation of IEM can be divided into three categories.

2.6.1 Initiation

The first category is initiation, this refers to “the legal, institutional and organisational elements” (Margerum, 1999:154) the study found necessary to achieve successful integration. With regards to the legal element of initiation, laws and policies need to prescribe integration (Margerum, 1999:155). The policies should include a variety of environmental concerns and not just isolate one, therefore the natural, social and economic environment concerns should be accounted for. The institutional element refers to the resources necessary to implement integration, Margerum, (1999:155) identifies these resources to include staff, funds and facility resources. Another suggestion would be to assign a permanent coordinator. The organisational element refers to the stakeholders in the integration effort. A variety of stakeholders like professionals from various backgrounds such as management backgrounds, environmental, planning, etc. as well as the general public need to be represented so that a

less biased outcome is achieved (Margerum, 1999:157). Stakeholders need to possess certain skills such as communication skills, conflict resolution, planning processes, physical processes as well as social and economic skills. Overall, support is needed within the integration effort or else leading members face heavy workloads and time demands.

2.6.2 Operation

The second category is operation. This refers to the stakeholders and the elements that make them operate effectively (Margerum, 1999:154). The first element is communication. It has to be a two way approach between the individual and the committee, as well as the individual and the organisation he/she is representing. Stakeholders present need to learn to listen to one another, give everyone the opportunity to raise their concerns and set ground rules for communication procedures. The second element is decision-making. A general consensus needs to be developed for effective and efficient decision-making as it builds long-term trust and support for the decision made (Margerum, 1999:158). The third element is conflict resolution. Stakeholders need to develop conflict management skills. Conflict resolution could lead to positive outcomes. The fourth element is public consultation. This is a part of integration that should not be underestimated, the public represent the silent majority and their involvement yields higher degrees of accomplishment (Margerum, 1999:159). The last element is research and data. A wide range of quality research and data is necessary so that informed decisions are based on accepted data in the environmental field.

2.6.3 Outputs and outcomes

The final category refers to outcomes and outputs which constitutes a successful integrated plan. Successful integration results in familiarity, common goals and a mutual understanding (Margerum, 1999:159) within the integration effort. This is necessary for stakeholders to complete their objectives. Strategies to implement the integration needs to be formulated into a plan, usually integration efforts focus too much on the plan than the actual integration, this is a result of a lack of prioritisation (Margerum, 1999:160) as well as too complicated and detailed procedures that are restrictive and difficult to implement. Margerum (1999:162) suggests that issues should be tackled from a bottom-up approach in that integration efforts should start at the point of the problem and then work itself up and along the way identify the resources necessary to address the problem. One of the most important outputs identified is; the need for strategies and mechanisms that encourage ongoing participation, information exchange and joint decision-making during the implementation phase as a result of the

integration processes becoming more complex during this stage. Once planning has been done, immediate action needs to be taken. This results in better trust and support. It also creates a healthy momentum that could lead smaller activities into larger ones.

2.7. MEANINGS OF INTEGRATION

Scrase and Sheate (2010), identifies the different meanings of integration. These meanings can also be understood as what is required for integration to be successful and can be added to the categories mentioned above.

2.7.1. Integration through information

The first meaning refers to integration through information resources. Data should be gathered in a coordinated manner and not independently because independent data can be manipulated to achieve a desired outcome (Scrase and Sheate, 2010:279) and therefore coordinated data should be used in policy decision-making to get a holistic understanding of issues.

2.7.2. Integration governance

Secondly, environmental concerns should be integrated into governance so that environmental concerns are considered with other concerns and not separately. This would result in it being considered equally with social and economic concerns, hence promoting protection of the environment within these concerns.

2.7.3. Integrated planning and management

Thirdly, vertically integrated planning and management needs to be achieved. In this case, national levels of government (or top levels of management) should not undermine the importance of local level planning and management of the environment (Scrase and Sheate, 2010:279). A culture of learning between the levels of government should be established. Learning through integration leads to more effective planning and management of the environment across the spheres of government.

2.7.4. Integration amongst assessment tools

Lastly, integration needs to occur amongst assessment tools to avoid duplication. An alternative to integrating them could be linking them instead, this is sometimes more desirable and easier to implement. The difference between linking and integration is that

integration entails the entire assessment to be integrated with another which results in a completely new assessment, whereas linking allows the assessment to keep its “unique identity” yet still speak to another. It thus allows for joint decision-making at defined junctions (Scrase and Sheate, 2010:286), an example of this junction would be a broader assessment tool like a strategic environmental assessment wherein issues that need to be integrated are identified.

2.7.5 Principles of IEM

The IEM principles are summarised in the Information Series Document from the Department of Environmental Affairs and was compiled using resources from both national and international spheres including NEMA’s environmental principles, the International Association for Impact Assessment (IAIA) and Agenda 21 amongst others.

These principles are also considered as factors that are needed to achieve successful IEM and in addition to those mentioned above, include:

- Accountability and responsibility – all stakeholders should be accountable and responsible for their roles and actions in any integration efforts.
- Adaptive – stakeholders as well as any plans, policies, programmes or strategies should be adaptive as the environment is ever changing. Therefore it should be flexible and realistic.
- All alternative options should be considered in the decision-making process and the best options should be chosen with regards to trade-offs and implementation.
- Environmental justice – the impacts of the environment should not discriminate against any person.
- Equity – this refers to access to environmental services (services offered to us by the environment) to provide basic human needs and well-being.
- Polluter pays – any environmental degradation that takes place must be paid by those responsible for it.
- Sustainability –the use of natural resources should not be used in a manner that results in long-term decline and hinders future generations.
- Transparency – decisions and access to information need to be accessible and open for comment to the general public (Department of Environmental Affairs and Tourism, 2004(a):9-10).

2.7.6. No simple solution

There is no simple solution to the challenge of integration. The factors that contribute to the success of integration will have to fit the nature of the organisation and work within the opportunities and constraints thereof. Some might find that it works best when integration comes from the experts and top management, others might find it works best from a decentralized bottom-up approach, each accompanied by their own set of benefits and constraints. “[S]imply calling for intersectoral working does not mean that different interest groups suddenly begin to share the same objectives and ways of working” (Cowell and Martin, 2003:177), previously conflicting policies, documentation, goals and objectives need to become mutually interrelated and there are a number of factors that can influence this. Social and cultural contexts, past practices, local traditions and political attitudes accompanied by the above mentioned factors need to be understood and effectively applied or altered to overcome fragmentation. Hence, organisations need to understand that there are a number of factors that need to work together to achieve successful integration and it is a challenge in itself to identify and implement the approaches and factors that will best suit your organisational design, but bear in mind that these approaches do not guarantee success but improves the likelihood of identifying an effective one.

2.8 INTEGRATION INTO DECISION MAKING

The assessment tools discussed below can be understood to be tools that facilitate integration of environmental issues into decision-making. An environmental management system is also described although it is not considered a tool; it is a system that allows for environmental integration both vertically and horizontally within an organisation.

2.8.1 Integrated Development Plan

An Integrated Development Plan (IDP) is a strategic planning instrument to guide planning and development at the local level of government. This includes the local, metropolitan and district municipalities, all of whom are responsible to develop an IDP. The IDP is based on local needs, conditions and resources therefore it is a highly participatory process and is considered as a tool for participatory and developmental local government. Developmental local government can be defined as “the dynamic way in which local councils work with local communities to find sustainable ways to meet their needs and improve their lives” (Department of Environmental Affairs and Tourism, 2004(b):6).

Integration is the main idea behind the IDP, as it allows for a holistic approach to development “by bringing together different sectors, issues and interests during planning and when considering development options” (Department of Environmental Affairs and Tourism, 2004(b):6). To assure integration and alignment between the three spheres of government the local IDP’s have to align with the district IDP’s and the district have to be aligned with the provincial IDP’s. IDP’s also have to incorporate the principles and legal requirements of other relevant national and provincial policies, legislation and plans such as the Constitution (RSA, 1996), National Environmental Management Act (107 of 1998) (RSA, 1998), Municipal Systems Act (32 of 2000), National and Provincial Sustainable Development Plans etc. The Municipal Systems Act (32 of 2000) (RSA, 2000) lists the minimum contents of the IDP. The IDP is a process, a document and integrating instrument for everything done in the municipality including integration. There are other environmental tools that can be used to facilitate and inform the IDP process and are discussed below. These tools are seen as a means of integrating environmental concerns into the development decisions of the IDP.

2.8.2 Spatial Development Framework

A Spatial Development Framework (SDF) describes the future land use patterns and developments in the entire municipal area, it can be understood as a land use management system for the municipality and is a legal requirement under the Municipal Systems Act (RSA, 2000) and is thus a legally binding framework. What this means is that any assessments done for the municipality has to be aligned with the SDF.

According to the Western Cape Provincial Environmental Toolkit, the SDF aims to create a vision of how the municipal area should develop and serves as an information source and guideline for decisions on land development within a municipal area. It indicates where certain land use types are permissible and where certain activities are permitted; it spatially integrates the strategies of various sections and also promotes sustainable development by integrating environmental, social and economic sustainable options.

2.8.3 Environmental Management Framework

An Environmental Management Framework (EMF) is a spatial framework wherein specific environmental parameters are set and consists of a compilation of information maps displaying the environmental characteristics of a particular area. The primary objective of an EMF is to support environmental decision-making within an area, for example: a municipal area. An EMF helps to determine whether there are activities within the geographical area that require environmental authorisation or whether they don't require environmental authorisation, it assists with the screening phase of an EIA report by being able to proactively identify areas of conflict with regards to the environment, it identifies environmental control zones which need special management attention, integrates the biophysical; build and planned environments and is used to inform decision-makers (Department of Environmental Affairs and Tourism, 2004(b)). An EMF also assists developers to take into account the NEMA principles in relation to the actions that could have an impact on the environment (Department of Environmental Affairs and Development Planning, 2015:5).

Section 24(3) in the National Environmental Management Act (107 of 1998) (NEMA) (RSA, 1998) makes reference to information and maps that specify the attributes of the environment in particular environmental areas, the information and maps were defined in Chapter 8 of the NEMA EIA Regulations No. 385 of 2006 as EMFs, these regulations were promulgated in 2010 and remained the same since then. EMFs must be used in coordination with EIAs in a specific area to identify the factors that need to be considered, to identify sensitive areas and to assess the project in context of the area (Department of Environmental Affairs and Development Planning, 2015:7). It thus should be used by all authorities and stakeholders who plan to develop in a specific area so that common information is used and development is based on common sustainability goals. The EMF should not be confused or used to replace the SDF in an area, it is not a land use plan, but is rather concerned with environmental characteristics of an area.

2.8.4 Strategic Environmental Assessment

A Strategic Environmental Assessment (SEA) is a strategic planning document that provides information on an areas environmental resource base (Department of Environmental Affairs and Tourism, 2004(b):36). It identifies environmental opportunities and constraints that go beyond the scope of individual projects, unlike an EIA; an SEA is a proactive approach to addressing environmental issues and can be spread over a geographical area or even be

developed for a specific sector. It identifies large scale cumulative effects of development on the environment and aims to link the environment with social and economic considerations. A set of guidelines are then produced to ensure that development for a geographic area or sector is within sustainable limits. It is more proactive and not project focused like an EIA. The SEA can be considered as a strategic planning tool that can be incorporated into the IDP of a local municipality.

2.8.5 Environmental Impact Assessment

An Environmental Impact Assessment (EIA) “aims to provide decision-makers with clear information on likely impacts and implications of a proposed activity” (Department of Environmental Affairs and Tourism, 2004(b):43), however, it is considered a reactive tool as it only assesses the environmental impacts and considers alternatives after a development is proposed. Additional aims include, assessing the alternatives for an activity and to determine mitigation measures and enhance benefits, to provide clear information on the impacts of the proposed activity, to educate the public on the environmental implications of the proposed development and to involve them in the decision-making process (Department of Environmental Affairs and Tourism, 2004(b)). Any activity listed in the NEMA EIA Regulations 2014 will legally require a form of EIA. The findings of the SDF, EMF and an SEA (if there is one done that includes the area of the proposed development), have to be taken into account by the EIA. An Environmental Management Plan (EMP) is usually a section within an EIA which describes the methods and procedure of mitigation and monitoring associated with the proposed development and is used throughout the project life cycle.

2.8.6 Environmental Management Systems

ISO is the International Organisation for Standardisation and has developed standards that “help organisations take a proactive approach to managing environmental issues” (Environmental Management: The ISO14000 family of International Standards, 2009). ISO 14000 is referred to the family of standards with regards to environmental management. “ISO 14001 is the world’s most recognised framework for environmental management systems (EMS) ... that helps organisations both to manage better the impacts of their activities on the environment and to demonstrate sound environmental management” (Environmental Management: The ISO 14000 family of International Standards, 2009). One of the categories in ISO14001 is organisational evaluation, which includes the EMS and the auditing and

performance standards that are used to evaluate organisations, the EMS is the framework for the management system and the auditing and performance standards evaluate and ensure successful implementation of the EMS (Melnyk, Sroufe and Calantone, 2003:331).

So how do the EMS and ISO 14001 standards link? ISO 14001 is also the guideline for designing an EMS. An EMS is put in place within an organisation to meet the ISO 14001 standards, if it wishes to obtain ISO 14001 certification.

2.8.7 What is an EMS?

According to Melnyk *et al.*, (2003:332) an EMS involves the formal system and database which integrates procedures and processes for the training of personnel, monitoring, summarising, and reporting of specialised environmental performance information to internal and external stakeholders of the organisation. The purpose is to develop, implement, manage, coordinate and monitor the environmental activities of that organisation. It allows an organisation to evaluate its environmental performance against its goals or objectives as well as seeks to improve its performance. An EMS should establish a system of operation, control and maintenance. This is achieved through the Plan-Do-Check-Act cycle by which an EMS is implemented.

- Plan refers to the EMS implementation, organisations need to set environmental related goals for its processes and identify how they are going to reach these goals
- Do refers to implementing the set out processes and managing the environmental aspects of the processes
- Check is the conduct of audits and evaluation of environmental performance in the organisation and
- Act is the stage in the cycle where in the information found is communicated and possible improvements are identified. The cycle is then repeated and the improvements are implemented.

A study was done by Morrow and Rondinelli (2002:162–166) which focused on EMS in smaller domestic gas companies in Germany, it identified the motivations for adopting and EMS, the benefits for implementing an EMS as well as the impacts and results thereof. The motivations and benefits for adopting an EMS were found to be similar and are listed below:

- An EMS ensures that operations are operating in environmentally responsible ways.
- It identifies weaknesses.
- Makes it easier for companies to assess their commitment to improving their environmental performance.
- Helps reduce environmental incidents and liabilities.
- Increases the efficiency and effectiveness of operations.
- Contributes to the development and sharing of new environmental solutions.
- Obtains goals in a sustainable manner.
- It ensures that responsibility is appropriately assigned for maintaining the environmental standards.
- It increases environmental awareness in the organisational processes and activities.
- Allows information to flow back to management.

The results from the above mentioned study included better integrated organisational documentation and procedures, improved image of the organisation in terms of corporate social responsibility, greater employee motivation, improved cooperation, cost savings, and the EMS gave more weight to an organisations emphasis on environmental management (Morrow and Rondinelli, 2002:167-169). Factors such as the level of cooperation and employee motivation can be motivated by the fact that organisations want to achieve ISO14001 certification so that they are legally compliant in terms of environmental management practices, if organisations do not aim to achieve certification, these results might be missing.

With regards to integration, the above mentioned tools should all be combined and driven by IEM. IEM should be the overarching principles in all these tools. The overarching planning document should be the IDP, informed by the SDF and EMF, smaller assessments should then follow. The SDF and EMF should be used in conjunction with each other when development decisions are made and should bear in mind the objectives set in the IDP for development and planning, as well as environmental management. The SEA and EIA reports should apply the guidelines set in the SDF and EMF. In this way all the tools can be utilised to achieve IEM. The EMS on the other hand should be placed above the IDP and below IEM; all feedback on the processes within the framework should be reported back to the official responsible for the implementation of the EMS.

2.9 ORGANISATIONAL DESIGN AND STRUCTURE

Organisational design can be understood as the management of organisational structure. In other words it “is concerned with constructing and changing an organisation’s structure to achieve the organisation’s goals” (Robbins, 1990:6), while organisational structure is concerned with “how [the] tasks are to be allocated, who reports to whom, and the formal coordinating mechanisms and interaction patterns that will be followed ... ” (Robbins, 1990:5). Organisation structure is subject to change according to the needs and goals of the organisation itself. Hence, organisation design will aid in identifying the appropriate structure to achieve the goals. So what is looked at when restructuring the business?

There are many variables to consider when restructuring an organisation such as the administrative component, delegation of authority, differentiation, integration, professionalisation, span of control, specialisation and standardisation, however three core variables are identified in literature as the more dominant components of organisational structure (Robbins, 1990:82-83), namely, complexity, formalisation and centralisation. They are identified as dominant components because the other variables are referred to either directly or indirectly within each component.

2.9.1 Three components of organisational structure

2.9.1.1 Complexity

Complexity can be defined as “the degree of differentiation that exists within an organisation” (Robbins, 1990:83). Differentiation is “[t]he number of specialty functions represented in a firm or the difference in ... orientation among managers in different departments” (Robbins, 1990:82). There are three kinds of differentiation that constitute complexity namely, horizontal differentiation, vertical differentiation and spatial differentiation.

Horizontal differentiation can be defined as “the degree of differentiation between units ...” (Robbins, 1990:83). The more diverse the skills and knowledge in an organisation the more complex the organisation, personnel might be on the same level, for example managers but, have different training and qualifications.

Vertical differentiation on the other hand “refers to the depth in the structure” (Robbins, 1990:87), in other words, the hierarchical levels within an organisation. As the depth of an organisation increases, so does the complexity due to the fact that operations have to go

through more levels to reach top management decision-making. Ironically, vertical differentiation contributes to coordination efforts in that horizontal differentiation needs to be brought together at some point, the point ideally being top management who has a bird's eye viewpoint of operations.

Two forms of vertical differentiation exist. Either organisation can be wide and flat or narrow and tall. This refers to the span of control which is "the number of subordinates that an individual manager can and should supervise" (Robbins, 1990:82). Tall organisational structures have narrow spans while flat structures tend to have wider spans of control. Tall structures have tighter controls and closer supervision with more complex communication lines while wider structures have better communication advantages and more relaxed control from top management.

Both horizontal and vertical differentiation is based on two variables: specialisation (knowledge and skills) and departmentation (grouping). With regards to the former, the more specialised an organisation, the more complex it will be due to the different professionals found within. Professionals would survive in a wider structure because they don't need close supervision as they are expected to be capable of better decision-making. Specialisation leads to departmentation as professionals of the same profession are grouped together. Professionals only communicate within their field of expertise. This creates a complex environment with regards to cross departmental coordination. With regards to this, a tall structure will render better communication and coordination as managers have a facilitator role to play, and have the power to implement and encourage cross departmental coordination.

Even if horizontal differentiation and vertical differentiation were ideally structured within an organisation to achieve optimal performance, the spatial entity of the activities would still influence complexity.

Spatial differentiation is "the degree to which the location of an organisation's offices, plants, and personnel are dispersed geographically" (Robbins, 1990:89). It is an extension of vertical and horizontal differentiation in that both can be spatially dispersed (physically) which increases the complexity in each, and thus the organisational operations in general.

It is clear that as differentiation increases so does complexity and communication and integration becomes challenging to implement effectively. Horizontal, vertical and spatial differentiation can occur within departments depending on the nature and size thereof. The departments in the organisation need to be coordinated, controlled and practice efficient communication, the more complex the departments, the more complex the organisation and the greater the need to improve the organisational structure for effective coordination, control and communication (Robbins, 1990:93).

2.9.1.2 Formalisation

Formalisation is the “the degree to which jobs within [an] organisation is standardized” (Robbins, 1990:93). Standardisation is “[t]he range of variation that is tolerated within the rules defining the jobs” (Robbins, 1990:82). When there is minimal discretion regarding what has to be done, when or how it has to be done, employees operate in a consistent way, following rules or procedures, then the level of formalisation is high. Low levels of formalisation are found when employees in an organisation are considered professionals, the rules are less rigid and are they trusted with the freedom to be discrete in their work. This can be referred to as the degrees of formalisation which can be achieved by loosening or tightening the role expectations from employees (Robbins, 1990:100). High and low levels appear at different levels in an organisation, usually those lower down in the hierarchy experience higher levels of formalisation than those higher up due to specialisation. For example, a clerk in a department has specific procedures to follow that will result in a predetermined outcome, while a manager needs the freedom to be more innovative in his work to deal with unpredictable challenges. Standardisation contributes to an increased degree of coordination (Robbins, 1990:96). Each employee understands what he/she has to do to complete a task or project, resulting in is less confusion and better coordination (clerk). On the other hand, those who are less standardised are able to be innovative and challenge operations of a business and increase the complexity of the operations (professionals and manager). Either way, organisations cannot function without a certain level of standardisation because it allows for control and coordination to a certain extent.

There are various techniques that an organisation can use to bring about the preferred level of standardisation required in employees, namely rules, procedures and policies. “Rules are explicit statements that tell an employee what he or she ought or ought not to do” (Robbins, 1990:100). Rules are specific patterns that need to be carried out and leave minimal to no

room for discretion from employees. Procedures on the other hand “are a series of interrelated sequential steps that employees follow in the accomplishment of their job tasks” (Robbins, 1990:100). It’s a standard process or sequence that needs to be followed to achieve the goals of the organisation. Procedures also leave minimal room for discretion. “Policies are guidelines that set constraints on decisions that employees make” (Robbins, 1990:100), but has greater leeway than rules and procedures. It sets the boundaries for discretion in the organisation and management has to make their decisions within these boundaries. Each technique brings about a degree of standardisation and formalisation. Rules are more standardised than procedures, procedures more standardised than policies, hence rules have a higher degree of formalisation and policies have a lower degree but in the end each technique is aimed to “instil in employees preferred work behaviours and attitudes” (Robbins, 1990:102). The more standardised an organisation is, the more rules, procedures and policies to follow, the higher the degree of formalisation in that organisation.

2.9.1.3 Centralisation

“Centralisation is concerned with the dispersion of authority to make decisions within the organisation ...” (Robbins, 1990:104). Authority is “the formal rights inherent in a managerial position to give orders and expect the orders to be obeyed” (Robbins, 1990:104). Decision-making can occur at any level within an organisation but is usually centralised within top management. Lower level employees collect information necessary for decision-making, interpret the data and decide which information is suitable to transfer to top management to base their decisions on, however, it is argued that in this case decision-making is not completely centralised in that lower level employees have indirect control over decision-making through this process. Questions are raised whether centralisation is actually centralized. It comes down to the degree of control that employees or managers have over decision-making which determines the measure of centralisation. Decision-making is most centralised when the decision maker, has control over the information used to make the decision (Robbins, 1990:110). The lowest form of centralisation (decentralisation) occurs when the decision-maker only makes the decision based on the data collected by other employees. Realistically, managers have a limit on the amount of data that can be analysed and processed by them and need to decentralize the decision-making process. Therefore, to some extent companies need both centralisation and decentralisation.

Centralised decision-making is associated with low complexity as decisions are made by a single person or unit. Decentralisation is associated with high complexity. Organisations who practice decentralised decision-making usually employ professional staff at lower levels who are granted the freedom to making technical decisions, complexity is therefore increased because decisions are made within departments and not from a central point or in conjunction with departments.

Centralisation is associated with more strategic decision-making which is the concern of top management (Robbins, 1990:113). Therefore, even though professionals or even some lower staff members are given the freedom to practice decentralized decision-making, it is under managements rule and they can still influence the decisions made by them. Centralisation is thus present even where decentralisation is practiced.

2.10 ORGANISATIONAL DESIGN

There are 5 distinct design configurations that organisations can apply namely, the simple structure, the divisional structure, the machine bureaucracy, professional bureaucracy and adhocracy.

2.10.1 Simple structure

The simple structure is ideal for starting organisations as they allow for fast and flexible behaviour within a business (Robbins, 1990:282). In a straightforward structure only one individual is responsible for the decision-making and hence it is characterised by a great amount of control and high centralisation, these businesses are usually flat with a wide span of control, flat referring to the vertical hierarchy, and wide referring to horizontal hierarchy. The simple structure is ideal for organisational managers who want power and control, hence complexity is low and formalisation is high.

2.10.2 Machine bureaucracy

Organisations that implement machine bureaucracy designs consist of multiple functional departments wherein specialists are grouped together. These specialists follow standardised work processes and much formalised rules and regulations that are set forth by a central authority. Decision-making thus follows a chain of command in a vertical hierarchy. Complexity is increased due to departmentalisation in that each department has their own set of functional goals, the professionals/ specialists become determined to achieve their function

goals that they might override the importance of the organisational goals (Robbins, 1990:285), hence management relies on “standardized work processes for coordination and control” (Robbins, 1990:283). On the other hand, due to the rules, procedures and policies, change is not handled well in these organisations. Even though professionals are granted freedom to be innovative in their decision-making, they tend to be strictly coherent to these rules, procedures and policies. Since, these standards only deal with challenges as predicted by management, change is an obstacle overcome with difficulty. Machine bureaucracy thus have a high degree of formalisation and most decisions, include challenges rely on centralised decision-making.

2.10.3 Professional bureaucracy

Professional bureaucracy has less control than a machine bureaucracy in that formalisation is internalised by the professionals rather than imposed by the organisation (Robbins, 1990:289) meaning professionals formalise their own set of rules and procedures. Top management thus needs to give up central control so that professionals can carry out their work effectively (Robbins, 1990:291). The power of this bureaucracy lies within the employees who have the skills and knowledge to complete operations. Rules and procedures that are set by top management are still present due to professionals having support staff such as clerks, secretaries, etc. who need to follow strict procedures. Overall, professional bureaucracies combine standardisation and decentralisation (Robbins, 1990:289), the bigger bureaucracies are characterised with high complexity as professionals are still departmentalised and challenges exist in breaking those barriers for better integration. It is important to note that both machine bureaucracy and professional bureaucracy are better suited to bigger organisations.

Bureaucracies are mechanistic forms of organisational design in that it is characterized by high formalisation and high complexity environments.

2.10.4 Divisional structure

The divisional structure consist of “a set of autonomous units, each typically a machine bureaucracy unto itself, coordinated by a central headquarters” (Robbins, 1990:294). Middle management has the most control because they are considered the central decision-making authority within each of these machine bureaucracies but not in the overall organisation. They still need to adhere to the overarching guidelines of the organisation, hence a divisional

structure practices decentralisation with coordinated control by the manager but with a high degree of formalisation. Complexity on the other hand is a challenge in a divisional structure as there is limited incentive for cooperation and coordination between the smaller machine bureaucracies since each has developed its own set of objectives and “territorial protectionism by the individual divisions can make coordination by headquarters extremely difficult” (Robbins, 1990:297). Divisional structures are ideal for organisations that need to serve a large or multiple markets, they thus have a wide horizontal differentiation. Despite the large size of these organisations and the amount of freedom given to each division allowing it to function according to each managements preferences, to maintain a degree of coordination the divisions all adhere to general standardised rules, procedures and policies which makes it much like a machine bureaucracy, but multiple of them.

2.10.5 Adhocracy

Adhocracy is much unlike the above mentioned organisational designs. It relates most to the simple structure in that it is ideal for businesses that need to be flexible. Other than that adhocracy is “characterized by high horizontal differentiation, low vertical differentiation, low formalization, decentralization ...” (Robbins, 1990:299), in other words it consists of a group of professionals or in some cases affected parties, that come to together and form a temporary organisation usually designed to solve problems (Robbins, 1990:302), where no central manager is chosen, there are no strict rules, procedures or policies in place and everyone is represented equally. Adhocracy organisations are also best described as a pool of experts. It thus draws on these experts to achieve a range of information and opinions, conflict are a natural part of adhocracy but it “is the preferred mechanism for facilitating ... integration” (Robbins, 1990:303). It ideally suits environments that are complex and dynamic and can be applied within other organisational designs.

Within adhocracy we find a network structure which is “a small central organisation that relies on other organisations to perform ... business functions on a contract basis” (Robbins, 1990:346). Primary functions are contracted out to external organisations while the network structure which consists of a group of executives or managers in an organisation, focus on the overall objectives of the operation. Thus, the members in the network structure spend their time coordination and controlling functions. There are 3 forms of adhocracy. Firstly the collegial form which “represents the utmost in decentralization” (Robbins, 1990:350), there is full democracy in the making of all decisions and is characterized by minimum formalisation.

Secondly, the committee form. Everyone who is affected by the challenge or the decision to be made is represented in this form of adhocracy (Robbins, 1990:349). Committee forms can either be temporary or permanent depending on the nature of the challenge or decision-making. Lastly, the task force which is formed to deal with complex tasks that affect a number of divisions in an organisation (Robbins, 1990:348) much like a committee form. It's temporary, allows for flexibility and adaptability to challenges while keeping a bureaucratic form.

With regards to this study, the aim of an organisational design is to implement a design that allows for coordination (which is necessary to achieve IEM) instead of departments operating in silo's committed to their own objectives. Organisations need to select a design most suitable to achieve their overall objectives in a holistic manner. The main objective in this particular case would be integration of environmental concerns into the organisation.

Integration needs to occur on a horizontal as well as a vertical scale. Low levels of differentiation make it easier for managers to implement integration due to the fact that fewer employees and departments would need to be integrated. There needs to be operational and strategic level integration, intra-organisational integration (within the organisation) and inter-organisational integration (between 2 or more organisations).

The wrong organisational design can act as a barrier to integration. The major barriers include the rigidity of the organisation itself and the institutional, cultural and professional knowledge based barriers between departments (Cowell and Martin, 2003:175). Since bureaucratic designs dominate most organisations and are rather rigid due to their size and degree of formalisation, complexity and centralisation, adhocracy structures can be "added" or rather integrated into the existing design as a means to increase coordination/integration without major restructuring having to take place.

2.11 CONCLUSION

In conclusion, fragmented organisation with regards to environmental management need integration which can be achieved through better coordination. IEM is reactive, preventative or proactive depending on how the organisation values the environment. It can either be internal or external. External IEM on a smaller scale refers to integration across departments (like internal IEM) and on a broader scale refers to integration with stakeholders outside of the organisations operation.

Successful internal or external integration can be achieved through the factors necessary to achieve integration. These include institutional, legal and organisation elements, communication, efficient decision-making, conflict resolution, adequate research and data collection, common goals, mutual understanding, prioritisation, participation strategies, vertically integrated planning and management, assessment tools (IDP, SDF, EMF, SEA, EIA), an environmental management system and most importantly a concern for the environment followed by action. These factors and tools should be implemented in a way that adheres to the principles of IEM. The successful implementation of all these factors depends on the organisational design. It is a mechanism in which coordination between departments and stakeholders can be implemented. Once organisations have been implementing integration strategies, the degrees of integration (See figure 1.1) can be used to assess their progress. IEM is a means to an end, hence for organisations to achieve full integration (level 3 in figure 1.1) a culture for IEM needs to be established.

CHAPTER 3

CONCEPTUAL FRAMEWORK: INTERGOVERNMENTAL GOVERNANCE IN SOUTH AFRICA

3.1 INTEGRATED ENVIRONMENTAL GOVERNANCE IN SOUTH AFRICA

Most literature, policies, laws and regulations in South Africa refer to cooperative governance and/or intergovernmental relations. In this chapter a brief definition of cooperative governance and intergovernmental relations is presented below and it is concluded that these terms could be used interchangeably. The rest of the chapter will be looking at the legislative context of intergovernmental governance within South Africa to prove that integration is encouraged throughout the three spheres of government and within the environmental management field.

3.1.1 Definition of cooperative governance

According to De Villiers and Sindane (2011:3), cooperative governance

“is the lubricant that allows friction to be channelled into positive energy and movement; it is the unseen layer that allows the various parts of government to operate, to reach their potential and to serve the interests of the whole ... it is meant to strengthen each of these spheres and not to reduce or curtail their effectiveness”.

Malan (2005:230) states that cooperative governance is the fundamental philosophy of governance in that it's about partnership government and the values associated with it, it governs all aspects of government, its concerned with the arrangements for interaction between the different spheres of government and thus the deconcentration of power. Cooperative governance is found when two spheres or more of government have the same functional areas and both are empowered to make laws with regards to this functional area. To avoid competition, litigation and conflict, the three spheres have to cooperate with one another to avoid duplication and provide laws that are coherent.

3.1.2 Definition of intergovernmental relations

De Villiers and Sindane (2011:23) defines Intergovernmental Relations (IGR) as

“the relationships that arise between different governments or between organs of the state from different governments in the conduct of their affairs”.

Intergovernmental Relations is thus the term used to describe the cooperative relationships between the two spheres of government.

Hence, cooperative governance and IGR refers to the arrangements for interaction and partnership as well as the operations between various parts of government. It also refers to the cooperative relationships between the spheres of government in conducting their affairs. Cooperation is thus achieved through coordination. And since coordination is similar to integration, any legislation, policies or regulations that refer to cooperative governance or IGR refers to integration.

3.2 INTERNATIONAL CONTEXT

South Africa is a party to a number of treaties and various international organisations with regards to the natural environment, these treaties and organisations “has a direct impact on the management of environmental affairs at national level” (Strydom and King, 2009:81). The country is not bound by an international environmental instrument, which refers to any international agreements, declarations, conventions or protocols which relates to the management of the environment (Rabie, 2000:108). However, the Minister of Environmental Affairs has to submit an annual performance report on sustainable development to meet the government’s commitment to Agenda 21. One of the purposes of this report is to review the procedures for coordinating policies and budgets to meet the objectives of Agenda 21 (Rabie, 2000:108-109). The objectives related to coordination are discussed below.

3.2.1 Agenda 21

Agenda 21 is a global plan of action for sustainable development that was agreed on during the Earth Summit in Rio de Janeiro in Brazil in 1992. The focus was on the involvement of relevant stakeholders on an international scale to resolve development problems and to plan strategically for the future. It addresses the environmental related issues that global communities face and is composed of 40 chapters that identify these issues, as well as propose objectives and solutions to them. These are the ideas that governments need to put to work to achieve effective sustainable development.

In 1992, the custodian for Agenda 21 in South Africa was the Department of Environmental Affairs and Tourism. This Department has been split since 2009 into 2 separate departments, namely the Department of Environmental Affairs and the Department of Tourism. The Department of Environmental Affairs in a media release has renewed South Africa's commitment to sustainable development in 2012 wherein they reaffirmed the need to achieve sustainable development. The Department acknowledged that democracy, good governance and the rule of law at national and international levels are essential for sustainable development, that institutions at all levels need to be effective, transparent, accountable and democratic, and the need for participative decision-making is fundamental to sustainable development amongst others. The department reaffirmed South Africa's commitment to the implementation of Agenda 21.

Agenda 21 is divided into 3 parts. Part 1 refers to the social and economic dimensions, part 2 refers to the conservation and management of resources for development and part 3 refers to strengthening the role of major groups. Each part is then divided into chapters which consist of programme areas which are described in terms of basis of action, objectives, actions and implementation thereof. For the purpose of this study chapter 1, chapter 8 in part 1 will be discussed as well as chapter 28 in part 3. These can be used as a framework action plan to guide the implementation of coordination and cooperative governance in countries.

Chapter 1:

Chapter 1 provides an explanation of Agenda 21 by stating that it is a global consensus and political commitment at the highest level of cooperation with regards to development and environment. The implementation of Agenda 21 is the responsibility of national government in developed and developing countries and should be implemented through its plans, policies, processes and strategies. There is a strong emphasis on cooperation from both a national and international perspective in Agenda 21 and thus the international sphere is required to support the national sphere in formulation and implementation of its plans, policies, processes and strategies. Other organisations are also encouraged to contribute to the efforts of national in achieving its objectives.

Part 1: Chapter 8:

This chapter is divided into 4 programme areas:

1. Integrating environment and development at the policy, planning and management levels

This programme area is based on the fact that decision-making at policy, planning and management levels in countries separate economic, social and environmental factors. To achieve efficient sustainable development decision-making has to be reshaped to integrate these factors and this can be achieved on a national level. The overall objective “is to improve or restructure the decision-making process so that consideration of socio-economic and environmental issues is fully integrated and a broader range of public participation assured” (United Nations, 1992). This objective can be achieved by improving the decision-making process, improving planning and management systems, collecting data information through monitoring and evaluation and adopting a national strategy for sustainable development that harmonise the plans, policies, processes and strategies to incorporate sustainable development in decision-making.

2. Providing an effective legal and regulatory framework

There seems to be shortcoming in developing countries with regards to laws and regulations, therefore the basis for action in this programme area refers to developing and implementing integrated, enforceable and effective laws and regulations based on social, economic and environmentally sound principles (United Nations, 1992). The overall objective “is to promote ... the integration of environment and development policies through appropriate legal and regulatory policies, instruments and enforcement mechanisms at the national, state, provincial and local level” (United Nations, 1992). This can be achieved by making laws and regulations more effective by going through assessment processes and training, establishing procedures for remedying actions that negatively affected the environment, creating a cooperative environment with other organisations that could provide support and services for government in terms of laws and regulations and creating opportunities for training with regards to environment and development law.

3. Making effective use of economic instruments and market and other incentives

Markets, fiscal and economic policies seem to have an influence on the attitudes and behaviour of people towards the environment. It also has the capacity to deal with environment and development issues, for example: the polluter pays principle and carbon tax. There is thus a need, especially in developing countries and countries in transition to explore these market and economic approaches to environment and development. The overall

objective is “to incorporate environmental costs in the decisions of producers and consumers ... so that prices will appropriately reflect the relative scarcity and total value of resources and contribute towards the prevention of environmental degradation (United Nations, 1992)”. Activities include improving or reorienting governmental policies to encourage new markets in environmental resource management, to use economic and market instruments that are suitable for developing countries and countries in transition. The exchange of information about new found knowledge is encouraged to create a better understanding of sustainable development economics.

4. Establishing systems for integrated environmental and economic accounting

The basis for action is that sustainability has to be integrated into economic management. The overall objective “is to expand existing systems of national economic accounts in order to integrate environment and social dimensions in the accounting framework ...” (United, 1992). This objective can be achieved by strengthening international cooperation, utilising sustainable development indicators in national economic planning and decision-making. Environmental statistics and the national resource management departments should work in cooperation with the national accounts to make more informed decisions, national governments should look to the international sphere for guidance on how to achieve this. Overall, better data collection (information and technical) is necessary on a national and international level to achieve this objective.

Part 3: Chapter 28:

Local authority initiatives in support of Agenda 21:

Local authorities have an important role to play in regards to the implementation of the Agenda 21 objectives due to the fact that they are government level closest to the public and thus have a vital role in promoting sustainable development. Local governments are responsible for constructing, operating and maintaining economic, social and environmental infrastructure, overseeing planning and establishing local polices and implementing national and provincial policies (United Nations Conference on Environment and Development, 1992). The objectives for this chapter includes having consultative processes with the local public and the international sphere to first, increase cooperation between them and local government, also to increase cooperation between different governments and to exchange information, experience and technical assistance. These partnerships provide information that should be used to formulate local policies and also to support the programmes of local government.

In conclusion, the chapters discussed here proves that Agenda 21 acknowledges the need for better integration of environmental and development decision-making on a national sphere but needs the cooperation of the international sphere as well. Countries that implement Agenda 21 need to fit these objectives to their unique environments and to the departments most likely to effectively implement them. Agenda 21 is a platform which encourages international integration and cooperation to achieve sustainable development.

In the South African context, the principles of cooperation are mentioned in the Constitution (RSA, 1996) which is the overarching legislation in the country and must be implemented through other Acts, policies or programmes put forward by national government.

3.3 THE SOUTH AFRICAN CONTEXT

3.3.1 National sphere

The National sphere of government is responsible for policy making as well as developing the national standards and norms, rules and regulations. These standards, norms, rules and regulations are the framework in which Provincial and Local governments carry out their functions. The National sphere consists of the National Executive Council (NEC) comprised of the President and his council.

As stated in Section 44 of the Constitution (RSA, 1996) the national legislative authority is vested in Parliament which consists of the National Assembly and the National Council of Provinces. The National Assembly has the power to amend the Constitution, to pass legislation with regards to Schedule 4 (Annexure 2) but excluding Schedule 5 (Annexure 3) unless Parliament is subject to intervene with regards to the conditions set out in subsection (2) of Section 44. The Constitution further states that the National Assembly has the power to assign any of its legislative powers to any other sphere of government, except the power to amend the Constitution (RSA, 1996).

The National Council of Provinces (NCOP) has the power to participate in the amending of the Constitution, to pass legislation on any matter within the functional area of Schedule 4 (Annexure 2) and matters required by the Constitution to be passed in accordance with Section 76 of the Constitution. It also has the power to consider legislation passed by the National Assembly in accordance with Section 75 of the Constitution (RSA, 1996).

3.3.2 Provincial sphere

There are 9 provinces in South Africa: Western Cape, Eastern Cape, Northern Cape, Free State, Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga and the North West. Within the provincial sphere, authority is given to the Premier of the province who is supported by his or her Provincial Executive Council. Legislative authority is given to the provincial legislature to which the Provincial Executive Council is accountable too, it consists of members from the various political parties in the country and has the responsibility to pass on the Constitution and any provincial legislation that affect matters of the public.

The legislative authority of province is stipulated in Section 104 of the Constitution, it states that a province may pass a Constitution for its province or amend it in terms of Section 142 and 143 (RSA, 1996). The province may pass legislation with regards to the functional areas listed in Schedule 4 (Annexure 2) and Schedule 5 (Annexure 3) of the Constitution. It may also pass legislation to any functional areas assigned to it by national legislation or a function that the Constitution (RSA, 1996) envisages the provincial sphere to enact. The province may too assign any of its legislative powers to a Municipal Council in that province. Most of the public services in a country are shared between the National and Provincial spheres, such as health, education, safety, agriculture, etc. National is responsible for setting the frameworks regarding these services and province is mainly responsible for the implementation thereof within the set frameworks (RSA, 1996).

3.3.3 Local sphere

The local sphere of government consists of municipalities often referred to as the units of Local Government. It is the level closest to the people, has a developmental role to play and is an important sphere with regards to public participation. Municipalities are headed by a Municipal Manager and his/her Municipal Council who has legislative and executive authority over matters that concern the people in their specific domain. Municipalities can be divided into 3 categories: category A which refers to the metropolitan councils, category B which refers to “[a] municipality that shares municipal executive and legislative authority in its area with a Category C municipality within whose area it falls” (Department of Public Service and Administration (DPSA), 2003:19) and a category C municipality that refers to “[a] municipality that has municipal executive and legislative authority in an area that includes more than one municipality” (DPSA, 2003:19).

Section 156 of the Constitution (RSA, 1996) stipulates the powers and functions of municipalities. They have the executive authority and the rights to administer the local government matters listed in Part B of Schedule 4 (Annexure 2) and Schedule 5 (Annexure 3), as well as any other matters assigned to them through national and provincial legislation. Matters listed in Part A of Schedule 4 and Schedule 5 must be assigned to the Local government by National or Provincial government, if the matter relates to Local Government and if it has the capacity to effectively deal with the matter. Local Government has the power to publish by-laws (section 162 of the Constitution) to successfully implement its functions as long as they do not conflict with national or provincial legislation. This links in with Section 156(5) of the Constitution in that the municipality has the right to exercise its power concerning a matter that affects the performance of its functions (RSA, 1996).

Just like National supervises Provincial government, Provincial supervises the Local government in South Africa. The policies that are developed by Local as well as Provincial government have to align with the national policies and Acts, as well as the Constitution. The Constitution lists the responsibilities of each sphere of government; some departments in Provincial Government are liable to make their own policies that don't need to be consistent with national legislature (RSA, 1996).

3.4 THE CONSTITUTION (1996)

The Constitution of the Republic of South Africa of 1996 is the supreme law of the country and provides a macro organisational landscape for environmental governance post 1994. The Constitutional Sections discussed below relate to the environmental rights stipulated in the Constitution, as well as cooperative governance.

3.4.1 Section 24: Bill of Rights

Chapter 2 of the Constitution firmly entrenched environmental protection as a human right as well as imposed a Constitutional duty on the State to protect the environment through reasonable legislative measures (Van der Linde, 2007:7) by stating that:

24. Environment – Everyone has the right –

- (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 (RSA, 1996).

Section 24 is thus the environmental clause within the Constitution. When looking at subsection (a) of Section 24, it speaks about health, clearly this goes much further than the right to health care, but it states that health is now a component of environmental concern (Glazewski, 2000:85). Environmental health in this case would relate to air and water pollution, which is an environmental condition that may be detrimental to a person's health. With regards to well-being, Glazewski (2000:86) understands it to imply that the environment has inherent and intrinsic value for people and therefore it creates "a sense that we ought to utilise the environment in a morally responsible and ethical manner" (Glazewski, 2000:86). It also creates a sense of stewardship that implies people are the custodians of the environment.

Section 24(b) touches on the socio-economic right of the State to provide environmental quality and that all legislative measures must comply with the criteria relating to the prevention of pollution and ecological degradation and the promotion of conservation. Section 24(b)(iii) generally refers to the norm of sustainable development (RSA, 1996).

Section 24 is strengthened by Section 33 in the Constitution that "guarantees the right to just administrative action ... which requires action [to] be lawful, reasonable and procedurally fair and that written reasons must be provided for administrative decisions" (Strydom and King, 2009:224). Just administrative action could relate to the environment with regards to assisting a person who is disappointed by a potentially invalid environmental decision or action. This section thus allows that person to challenge that decision or action and practice his environmental right (RSA, 1996).

3.4.2 Chapter 3: Co-operative government

The principles of cooperative government are stipulated in chapter 3, Section 41(1) in the Constitution (Annexure 4). Cooperative government "represents the basic values of government as stipulate in the Constitution, as well as the implementation of these values through the establishment of structures and institutions" (Malan, 2005:229; RSA, 1996). It

generally states the governments should work together to provide services to the public and is a way of working and functioning and not an end in itself. Cooperation is the sharing of goals, information, joint planning, budgeting and cooperation with regards to policy development and implementation (RSA, 2010:6). It thus encourages healthy debate to address the needs of the society; it not only occupies itself with government relationships, but establishes a relationship between the three spheres of government and the public. In this manner it improves the states capacity to deliver its objectives in partnership with civil society (RSA, 2010:7).

According to Layman (2003:10) in Section 41(1)(c) of the Constitution, it mentions 4 requirements for delivering governance through cooperation. The first requirement is effective government which refers to the efficient and effective use of resources, secondly transparent government which implies that cooperative government should be a web of committees and consultations making it difficult to determine who is responsible for which task. Thirdly, an accountable government in that the executive should still be held liable for their decision and actions, and lastly, coherent government is government that should be rational and informed. The commitment of the South African government to apply the principles of cooperative government is evident from its efforts to provide structures and institutions to facilitate intergovernmental relations.

3.5 INTERGOVERNMENTAL RELATIONS FRAMEWORK ACT (13 of 2005)

Inter-governmental relations (IGR) are defined as the “relationships that arise between different governments or between organs of State from differing governments in the conduct of their affairs” (RSA, 2005). IGR also refers to “the complex and interdependent relations amongst three spheres of government as well as the co-ordination of public policies amongst the national, provincial and local government” (Department of Provincial and Local Government, 2008:7). Malan (2005:230) describes IGR as a means through which the values of co-operative governance may be expressed and includes legislative and executive functions. IGR can thus be understood as a form of integration as it facilitates coordination between the three spheres of government. The Intergovernmental Relations Framework Act (IGRFA) (13 of 2005) was passed in 2005 to make sure that the principles of co-operative governance as stipulated in chapter 3 of the Constitution are implemented (RSA, 1996; RSA, 2005).

The IGR system (it is referred to as a system because it sets mechanisms in which to coordinate the work of government and to establish a line of communication from National to Local government) evolves as better modes of cooperation emerge (Department of National Treasury, 2011:29), therefore this system is more of a working progress than a means to an end. It is however a complex and interdependent system as a result of “the variety of public officials involved in [IGR], the intensity and regularity of contacts among those officials, the importance of officials’ actions and attitudes, and the preoccupation with financial policy issues” (Malan,2005:228). Another issue that contributes to the complexity is the fact that it has to accommodate the geographic and social diversity of the officials needed to attend these IGR forums/structures.

The Department of National Treasury (2011:29-30) identified key elements and principles that underpin the IGR System, namely:

- Accountability – refers to the fact that each sphere has specific constitutionally defined powers and responsibility and is accountable to set their own priorities to its legislature and council;
- transparency and good governance – transparent reporting and arrangements within and between the spheres of government;
- mutual support – the spheres have to act cooperatively towards each other and try to avoid legal actions amongst them;
- redistribution, vertical division and revenue sharing – refers to the redistribution of resources and the vertical division of revenue;
- broadened access to services – the spheres has to design appropriate levels of service and explore innovative modes of delivery;
- responsibility over budgets – each of the spheres has the right to determine its own budget and the responsibility to comply with it.

All three spheres of government should recognise and implement these elements and principles within and between them.

Malan (2005:229) lists 6 main objectives of the IGR system that co-operative governance encourages the three spheres of government to achieve:

- To achieve key national policy goals, with clear objectives informed by provincial and local circumstances;
- to provide cost effective and sustainable service provision and be responsive to needs of communities and accessible to all;
- clearly demarcated areas of responsibility and accountability;
- deliberate management of devolution to provincial and local governments (by national government);
- the encouragement of creativity for collaboration and partnership while strengthening performance
- and elimination of unnecessary duplication and avoidance of turf battles.

These objectives are more formally stipulated in Section 5 (a) – (f) in the Intergovernmental Relations Framework Act (13 of 2005) (RSA, 2005). The success of the IGR system depends on the level of participation in the system. Participation should also be more co-operative than competitive, in other words, a negotiation approach should be used rather than a conflict approach.

The IGR structures accounted for in the Intergovernmental Relations Framework Act (13 of 2005) are discussed below, a discussion of the National Assembly and the National Council of Provinces is also discussed even though they are stipulated in the Constitution (RSA, 1996) instead.

3.6 IGR STRUCTURES IN SOUTH AFRICA

All the structures need to adhere to the principles of the IGR Framework Act (13 of 2005) (RSA, 2005) and hence implement integration between the 3 spheres of government and the public.

3.6.1 National Assembly

The National Assembly is prescribed by legislation in the Constitution Sections 46-59 and is therefore considered a statutory body with decision-making power. According to Section 55 (RSA, 1996) the National Assembly has to power to consider, pass, amend or reject any legislation as well as initiation or prepare legislation expect for monetary Bills. The National Assembly must also ensure that all executive organs of the State in National government are

accountable to the legislations passed by the National Assembly. The National Assembly also plays an “over – seer” role with regards to national executive authority, implementation of legislation and any other sphere of government. Section 59(RSA, 1996) allows the public to be involved in the National Assembly, therefore the National Assembly needs to facilitate this involvement by conducting transparent business and may not exclude the public unless it is found to be reasonable and justifiable.

3.6.2 National Council of Provinces

The National Council of Provinces (NCOP) is another instrument of IGR in the country with regards to policy-making and legislature and is comprised of 10 delegates from each province in the country. It represents the provincial sphere of government on a national level to ensure that provisions concerning (which are public issues) are taken into account and protected with regards to the formulation of policies and decision-making in the national sphere of government and thus acts as a national forum for public participation.

The legislative requirements and powers of the NCOP are stipulated in Sections 60-72 in the Constitution (RSA, 1996). According to Section 68 (RSA, 1996), the legislative power given to the NCOP allows the council to consider, pass, amend, propose amendments or reject legislation to the Council. It may initiate or prepare legislation with regards to the functional areas listed in Schedule 4 (Annexure 2) but may not prepare monetary bills. The NCOP also allows for participation by members of the national executive as stipulated in Section 66 as well as local government as stipulated in Section 67 (RSA, 1996). It also has to account for public involvement, conduct business in an open manner and may not exclude the public unless it is reasonable and justifiable to do so as stipulated in Section 72(a)(b)-(2) of the Constitution (RSA, 1996).

3.6.3 Presidents Coordinating Council

The Presidents Coordinating Council (PCC) emerged in 1999 in replacement of the Intergovernmental Forum which aimed to promote cooperation between the spheres of government but failed due to its size and lack of focus (Layman, 2003:13). The PCC was created to develop links between intergovernmental institutions (i.e., government) and structures (Malan, 2005: 232) and promotes cooperation between both national and provincial executive authority by addressing issues pertaining to Provincial government with the support of the National Department of Provincial and Local Government (DPLG). The forum “deals

with cross-sectoral issues and presents an opportunity for provinces to impact on national policies and programmes at [a] provincial level” (Layman, 2003:13). It is comprised of the President, the Deputy President, the 9 provincial premiers, the Minister of Provincial and Local Government, Minister in the Presidency, Minister of Finance, Minister of Public Service and Administration and the chairperson of the South African Local Government Association (SALGA). Section 8 in the Intergovernmental Relations Framework Act (13 of 2005) (RSA, 2005) states that the President convenes the meetings and determines the agenda. Suggestions for the agenda may be submitted to the Minister as well. The Intergovernmental Relations Framework Act (13 of 2005) also stipulates that it is a consultative structure in which the President can raise issues of national interest to hear the views of provincial and organised local government. A discussion of the implementation of national policies, the coordination and alignment of priorities, objectives and strategies across all three spheres of government and any other matters of strategic importance are discussed (RSA, 2005). Other discussions include the provision of services to detect failures and initiate preventative or correctional action, reports from other IGR structures and any other reports dealing with provincial and municipal performance (RSA, 2005).

According to the DPSA (2003:36) the additional responsibilities of the PCC include:

- enhancing the ability of the provincial executive councils to make an impact on the elaboration of national policies;
 - strengthening the capacity of provincial government to implement government policies and programmes; improving cooperation between the national and provincial spheres of government with regard to the strengthening of local government;
 - improving cooperation with regard to fiscal issues;
 - ensuring that there are coordinated programmes of implementation;
 - the PCC should further develop IGR practices and create new linkages with other IGR structures;
 - providing for direct interaction between the executive authorities of national and provincial government;
- to carry out the objectives set in a workshop of the PCC that was held on the 14th December 2001.

3.6.4 MinMECs

The Ministers and Members of Executive Councils (MinMEC) is an informal advisory and implementation structure of IGR because it is not constitutionally prescribed and therefore does not have real decision-making power. Any cabinet member may establish a national structure to promote and facilitate IGR in the functional area for which that cabinet member is responsible for (RSA, 2005). It is also created to promote executive IGR in South Africa (Malan, 2005:233) which refers to relations aimed at the executive heads of National and Provincial governments and is therefore comprised of national line function ministers and deputy ministers, provincial ministers/premieres, members of the executive council from all 9 provinces and a representative of SALGA.

MinMEC's have multiple functions such as to provides advice, identify problems and areas of conflict, it comments on National policy and proposed legislation and determines long and short- term priorities (DPSA, 2003:32). The structure also discusses matters of national interest within the specific functional areas of the Province and organised local government, it assists with the drafting of intergovernmental function policies and strategies for local government and coordinates and aligns strategic performance plans, priorities, objectives and strategies across the three spheres of government (Malan, 2005:233). Overall, the MinMEC's provide Province with the opportunity to interact with the National minister, and the matters discussed are then reported back to the PCC.

The role and functions of MinMEC are formalised in the Intergovernmental Relations Framework Act (13 of 2005) (RSA, 2005) Section 11(a) - (c) so that the structure has more binding decision-making power.

The following structures are the smaller IGR forums.

3.6.5 Premiers Coordinating Forum

The Premiers Coordinating Forum is a provincial IGR structure and it consists of the Premier, a member of the executive council responsible for local government, 2 mayors of district and metropolitan municipalities and a representative of organised local government in the province (Malan, 2005:235). The Premiers of the province establish these coordinating forums to promote IGR between the different provinces and local governments; it is thus a consultative forum wherein matters that affect local government in a specific province are

discussed (Malan, 2005:135). These matters discussed affect both the provincial and local governments and include discussing the implementation, and drafts of national policy and legislation, the development of provincial policy and legislation relating to that matter, the coordination of the provincial and local development planning to facilitate coherent planning, performance plans, priorities, objectives, strategies and other matters of strategic importance (RSA, 2005). The forum has to consider the reports of other IGR structures and report back annually to the PCC with regards to progress and matters of national interest (RSA, 2005).

In South Africa, we have the Eastern Cape Provincial Political Intergovernmental Forum, Free State Provincial and Local Government Coordinating Committee, Gauteng Intergovernmental Forum, Gauteng Premier's Coordinating Committee, KZN Provincial Cabinet Clusters, Mpumalanga Intergovernmental Forum and the Western Cape Provincial Advisory Forum.

3.6.6 District Mayor's Forum

This structure is established by the Mayor of a district municipality to promote IGR between the mayor of a district municipality and the mayor of the local municipality in that district. National and provincial legislation are discussed at these forums as well as any other local government interests that require the guidance of district municipality. Such interests include service delivery, planning and development and coordination and alignment of strategic performance plans, priorities, objectives and strategies (RSA, 2005). The matters regarding national and provincial policy and legislation are discussed as well as those arising from the Premiers Coordinating Forum. Two or more municipalities may also establish inter-municipal forums which are aimed at implementing IGR between two or more municipalities.

The matters discussed in this forum can be taken up to national through SALGA which represents local government on a national level. SALGA is present at the PCC, MinMECs, budget forums and the extended Cabinet.

3.6.7 Forum for South African Director's General (FOSAD)

Forum for South African Director's General (FOSAD) is an administrative IGR, meaning it aims to create "relations between officials and structures that exist for administrative purposes" (Malan, 2005:236). National and provincial director-generals are represented on this forum with the aim to promote Section 41 of the Constitution (cooperative government).

FOSAD encourages vertical coordination through the three spheres of government and horizontal coordination through the various departments within the three spheres of government.

FOSAD is an important instrument for the coordination and implementation of national policy; this can be regarded as its fore-most activity (DPSA, 2003:33). Other roles include the fostering of a dynamic interface between political structures, improving the horizontal and vertical coordination and the sharing of information (DPSA, 2003:33). FOSAD is there to support and facilitate the promotion of cooperative governance by providing formal technical support to the forums (RSA, 2005).

Overall, an intergovernmental structure is a forum for intergovernmental consultation and discussion that includes all three spheres of government, although it is not an executive decision-making body, it may adopt resolutions or make recommendations in terms of agreed procedures (RSA, 2005).

3.7 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (107 of 1998)

The National Environmental Management Act (NEMA) (107 of 1998) is a legislative mechanism which provides a framework for environmental protection that embraces all three fields of environmental concern, namely resource conservation and exploitation, pollution control and waste management and land use planning and development. Through this framework “it can give force to constitutional provisions dealing with environmental rights” (Strydom and King, 2009:194). The framework provides a vehicle for Integrated Environmental Management (IEM), complementary subsidiarity and sectoral laws and the potential to enhance cooperative environmental governance (Strydom and King, 2009:194). Other laws that relate or deal with the environment may also contain the elements set out in this framework, in fact, to achieve IEM; it should contain the elements set out in this framework.

According to Strydom and King (2009:195) environmental frameworks in general have a set of characteristics and aims. These include:

- the generic legal elements such as international law principles, for example: sustainable development;

- flexible approaches to address changing environments and circumstances;
- dedicated specific sectoral legislation;
- inclusion of broad-based environmental policy and principles. This refers to environmental rights, ecological, economic and social sustainability.

The aims of these frameworks include:

- to ensure public participation during formulation;
- cooperative governance;
- innovative integration of multiple environmental management tools;
- frameworks should benefit the environment.

There are four pillars in NEMA, the first one refers to attempts to ensure quality environmental decisions are made through application of the principles, mentioned in Section 2 of NEMA. The second pillar is to provide cooperative governance procedures (RSA, 1998), thirdly that provision is made for public participation in environmental governance (RSA, 1998) and lastly that it adheres to the constitutional mandate to respect, protect, promote and fulfil the environmental right (RSA, 1998).

Frameworks like NEMA that include these characteristics and aims can achieve environmental protection through a legislative manner that incorporates integration, recognizes the generic principles, includes the public and thus enables overarching cooperation between the spheres of government and achieves the overall objective of sustainable development.

3.7.1 Principles

The 18 principles of NEMA are listed in chapter 1(2) of the Act (RSA, 1998) and provide a sound footing for environmental management in South Africa (Glazewski, 2000:168). They are essential to environmental decision-making and apply throughout the country and bind all the organs of the state (Strydom and King, 2009:198). According to Glazewski (2000:169) key international environmental and sustainable development principles are reflected in NEMA, such as the precautionary principles which is reflected in Section 2(4)(a)(vii), the preventative principles in Section 2(4)(a)(i)-(iv), the polluter pays principle in Section 2(4)(p), public trust doctrine in Section 2(4)(o) and the need to redress the imbalances of the past in Section 2(4)(d). Other norms that the principles generally address are sustainable

development, sustainable resource utilisation and socio-economic awareness (Strydom and King, 2009:201). According to Rabie (2000:96) the principles also serve as a general framework within which environmental management and environmental implementation plans must be formulated, it serves as guidelines to which any organ of the state must exercise any function with regards to the protection of the environment in terms of NEMA, it serves as a principle to which a mediator must make recommendations and a guide to the interpretation, administration and implementation of NEMA and any other law concerned with the protection or management of the environment.

Overall, “[t]hese principles provide the basis for integrated environmental management and decision-making in the country” (Strydom and King, 2009:201).

3.7.2 Committee for Environmental Coordination

The Committee for Environmental Coordination (CEC) is established in terms of chapter 2, Section 7(i) of NEMA. It “aims to promote integration and coordination of environmental functions by organs of the state” (Strydom and King, 2009:201) as well as “to ensure the application of both Environmental Implementation Plans (EIPs) and Environmental Management Plans (EMPs)” (Strydom and King, 2009:201-202). The committee is chaired by the Director-General of the Department of Environmental Affairs and Development Planning and consists of the Director-generals of the 9 main industries involved in environmental matters and the provincial heads of departments appointed by the Minister (RSA, 1998). Persons may also be invited to attend the meetings and to assist with the carrying out of its functions (RSA, 1998).

3.7.3 Environmental Implementation Plans and Environmental Management Plans

In terms of chapter 3 in NEMA, national departments in Schedule 1 (Annexure 5) of NEMA and provincial departments responsible to deal with environmental issues are required to develop Environmental Implementation Plans (EIPs) every 5 years. Every national department in Schedule 2 (Annexure 6) of NEMA is required to prepare an Environmental Management Plan (EMP). Every national department that is listed in both Schedule 1 and Schedule 2 of NEMA may prepare a consolidated EIP and EMP. Municipalities have to adhere to the national and provincial EIPs and EMPs developed so that the principles of NEMA is implemented coherently between all 3 spheres of government. An EIP aims to “co-ordinate environmental policies, plans, programmes and decisions and to secure the

protection of the environment across South Africa as a whole” (RSA, 2015). This is achieved in respect to the national, provincial and local government by coordinating and harmonising environmental policies, plans, programmes and decisions to minimise duplication of procedures and functions and to promote consistency in the exercise of functions, to give effect to cooperative governance as mention in chapter 3 of the Constitution, to secure the protection of the environment throughout the country, to prevent unreasonable actions in terms of the environmental that are harmful to other provinces and to enable monitoring, promotion and protection (RSA, 2015; RSA, 1996).

With regards to the Western Cape provincial government, the Province would draw up an EIP, municipalities would not need to draw up their own EIPs, but they need to adhere to the provincial EIP. Municipalities, however draw up their own EMP with regards to the EIP. The EMPs set out the mitigation measures for the environmental projects undertaken. The EIP sets out the measures for how the Province and municipalities are to implement the principles of NEMA. The EIP can be understood as a strategic document and framework from which the EMP as an operational document can be drawn up. In this manner coordination is achieved, because the municipal EMPs are set up in coordination with the Provincial EIPs. All municipalities in the province have the same strategic framework (EIP) to guide them in setting up their own operational EMPs for their environmental projects.

3.7.4 Cooperative governance in NEMA

NEMA gives effect to the Constitution’s provisions of cooperative governance through chapter 3: Procedures for Cooperative Governance by requiring the organs of the State to prepare implementation and management plans. These “plans are one of the principle ways of implementing the set principles in [NEMA]” (Glazewski, 2000:170). Provincial and National government listed in Schedule 1 and Schedule 2 of NEMA have to carry out these plans. Schedule 1 (Annexure 5) lists all the departments which may affect the environment and therefore have to prepare implementation plans. Schedule 2 (Annexure 6) lists all the departments that are involved in the management of the environment and therefore are required to prepare management plans.

The purpose of these plans is:

to coordinate and harmonise plans, policies, programmes and decisions by the various departments on the environment in order to minimise duplication and ensure

consistency between the various departments in their actions relating to the environment (Strydom and King, 2009: 202).

If departments have to prepare both implementation and management plans (listed in both Schedule 1 and 2) then provision is made in Section 11(3) of NEMA to prepare consolidated plans. Section 11(8) stipulates that the Minister may issue guidelines to assist with the preparation of the plans, consistency of plans are also required in terms of Section 11(4). Both the implementation and management plans have to “contain recommendations for the promotion and implementation of integrated environmental management as envisaged by NEMA” (Strydom and King, 2009:209), this is also stipulated in Section 13(1)(d) and Section 14(g) (RSA, 1998).

Once the plans have been prepared the “organs of the state have to perform their functions ... in accordance with the ... plans” (Rabie, 2000:100).

Integrated environmental management as envisaged by NEMA is stipulated in chapter 5 of the Act. This chapter of the Act gives effect to the environmental right contained in the Constitution by “[placing] a duty on the state to take certain measures with the view of full realization of the environmental right through sound management strategies, conservation, environmental education and an integrated approach to resource utilization” (Strydom and King, 2009:203; RSA, 1998; RSA, 1996).

The general objective of this chapter is to ensure the integrated management of activities (RSA, 1998) by referring to policies, programmes, plans and projects as well as to promote the application of appropriate management tools in order to ensure the IEM of activities (RSA, 1998). Further objectives of this chapter include:

- promoting the integration of the principles of environmental management into all decisions which may have an effect on the environment;
- to identify, predict and evaluate the actual and potential impact on the environmental, socio-economic and cultural heritage conditions;
- to ensure that the effects of the activities receive adequate consideration;
- to ensure that there is an opportunity for public participation;
- to ensure the consideration of environmental attributes in management and decision-making;

- identify and employ the mode environmental management best suited to ensure that an activity will pursue the principles of NEMA (RSA, 1998).

Section 24 of NEMA (107 of 1998) (RSA, 1998) sets out how the objectives are implemented through IEM. The general principle is that the impact of an activity that is an activity under the Listing Notices of NEMA must be considered, investigated and assessed prior to the implementation thereof; environmental authorisation needs to be provided before the commencement of the activity. The purpose of these regulations is to regulate the procedure and criteria relating to the submission, processing and consideration of, and decision on, applications for environmental authorisation as well as to integrate the environmental, social and economic issues of a proposed development (RSA, 1998). Within these listing notices the Minister identifies areas and activities that may not commence without environmental authorisation as well as those that may be excluded from environmental authorisation. The findings and recommendations of these investigations must reflect the principles of NEMA and IEM. A draft must be submitted to the CEC which has 30 days to approve or amend the prescribed regulations.

3.8 MUNICIPAL SYSTEMS ACT (32 of 2000)

The Municipal Systems Act (32 of 2000) (RSA, 2000) is a “key piece of legislation or law of parliament, meant to assist municipalities to achieve excellence in management of municipal affairs” (Mokale and Scheepers, 2011:30). The Municipal Systems Act (32 of 2000) is also “a framework for support, monitoring and standard setting by other spheres of government in order to progressively build local government into an efficient, frontline development agency capable of integrating the activities of all spheres of government for the overall social and economic upliftment of communities in harmony with their local natural environment ...” (RSA, 2000). The Local municipality is the sphere of government where actual integration takes place due it being the level closest to the civil public. All plans, policies, programmes, acts, etc. from National and Provincial government are implemented on this level of government and is termed the local government space or the window of coordination. Therefore “[a] municipality does not function or operate in isolation. It governs by cooperating closely with other municipalities, provincial and local government” (Mokale and Scheepers, 2011:19) and “... is responsible for implementing environmental policies, plans and programmes of national and provincial government, [by] ensuring alignment of [IDPs]

and provincial EIPs ...” (Strydom and King, 2009:82) to deliver efficient and effective services.

Chapter 2, Section 3 gives effect to the notion of cooperative government within the Municipal Systems Act (32 of 2000) (RSA, 2000). It states that municipalities must exercise their executive and legislative authority within the constitutional system of co-operative government as per Section 41 of the Constitution (RSA, 1996; RSA, 2000). According to Section 3(2) (RSA, 2000), “national and provincial government must, within the system of cooperative government, envisaged in section 41 of the Constitution, exercise their executive and legislative authority in a manner that does not compromise or impede the ability or right of a municipality ability or right to exercise its own executive and legislative authority” (Mokale and Scheepers, 2011:19; (RSA, 1996; RSA, 2000).

Section 3 (3)(a)-(d) (RSA 2000) further states that for the purpose of cooperative government and Section 3(2) (RSA, 2000) mentioned above, organised local government (an organisation recognised in terms of Section 2 (1) of the Organised Local Government Act (52 of 1997) (RSA, 1997) to represent local government nationally or provincially) must seek opportunities to develop common approaches for local government at a district level, it must seek to enhanced cooperation, mutual assistance and sharing of resources amongst the municipalities, municipalities should jointly find solutions for problems relating to local government and facilitate compliance with the principles of cooperative government and IGR.

Section 24 (1)-(4) of the Municipal Systems Act (32 of 2000) (RSA, 2000) stipulates municipal planning in cooperative governance. It states that to give effect to the principles of cooperative government, municipal plans and strategies have to be aligned with and complement the plans and strategies of other municipalities and spheres of government. Municipalities also need to participate in national and provincial development programmes. Any legislation initiated by national or provincial legislation that municipalities have to comply with must consult with organised local government before the legislature is introduced in parliament.

In this manner, municipalities to play a role in cooperative government in allegiance with national and provincial government as well as within the various municipalities in a province by having to align their plans and strategies with those of national, provincial and other local

municipalities. IGR and cooperative governance can be taken a “level” further and be practiced within a single local authority as well.

3.9 CONCLUSION

In conclusion, the legislative framework with regards to IEM includes the Constitution that states the environmental right of citizens and stipulates cooperative governance, the Intergovernmental Relations Framework Act (13 of 2005)(RSA, 2005)that generally aims to achieve the principles of cooperative governance and gives effect to the IGR structures in South Africa. NEMA which is the main environmental legislation in the country and accounts for the environmental right of the Constitution has its own environmental structures and cooperative government in the environmental field (RSA, 1996; RSA, 1998). The Municipal Structure Act (32 of 2000) (RSA, 2000) was discussed as the focus of this study relates to Drakenstein local municipality in the town of Paarl. There is recognition for the need for IEM throughout the 2 spheres of government and structures are in place that initiates integration efforts throughout government.

The legislation and structures for cooperative governance discussed in this chapter relates to external IEM. There needs to internal IEM within governments as well. A form of internal attempts to IEM is forums created by municipalities such as the Environmental Management Committee and the Natural Resource Reference Group in Drakenstein Municipality. Depending on the type of stakeholders invited, levels of participation and the agendas of these “internal structure” attempts to IEM, they can either be reactive, preventative or proactive. Other factors that can either contribute or hinder the successful implementation of IEM are the human resources component, documentation and policies and the goals and objectives of the municipality.

CHAPTER 4

FINDINGS AND EVALUATION

4.1 INTRODUCTION

This chapter aims to represent the findings from the interviews conducted and then evaluate them in terms of integrated environmental management themes discussed in chapter 2. Drakenstein Municipality was chosen as the study area with the focus on the environmental management section.

4.1.1 Location context

Drakenstein Municipality is situated in the Cape Winelands District of the Western Cape; it thus forms part of the Cape Winelands District Municipality, which includes the Category B municipalities of Stellenbosch, Breede Valley, Witzenberg and Drakenstein Municipality. The municipality is located on the national road and railway routes to the rest of South Africa and forms the gateway to the City of Cape Town. The municipality covers an area of 1 538 km² and includes the towns of Paarl (including Mbekweni), Wellington, Gouda, Saron, the rural hamlets of Hermon, Windmeul, Simondium, Bainskloof and the rural areas adjacent and between these towns (Drakenstein Municipality Integrated Development Plan 2012-2017, 2012). The Klein Drakenstein, Limiet and Saron Mountain range from its eastern edge and the agricultural area immediately to the west of the R45 its western border (Drakenstein Municipality Integrated Development Plan 2012-2017, 2012). Paarl and Wellington are the main urban centres in the municipal area.

Drakenstein Municipality's vision is to create a place of excellence. The vision will be executed through the following missions:

- Protecting and enhancing of the quality of life of our residents and the unique environment of our area.
- Providing efficient and effective delivery of services which is responsive to the community's needs.
- Promoting the principles of access, equity and social justice in the development of services.
- Developing an effective organisational culture which strives for service excellence.

- Exercising regulatory functions of Council consistently and without biasness.
- Encouraging community participation in the processes of Council by consulting widely on its activities and policies, and
- Creating an enabled environment for economic growth, job creation and the eradication of poverty (Drakenstein Municipality Integrated Development Plan 2012-2017, 2012).



Figure 4.1: Drakenstein Municipality Location Map

Source: Drakenstein Municipality Integrated Development Plan 2012-2017, 2012

The municipality is guided by the following values: transparency, accountability, excellence, accessibility, responsiveness and integrity. A customer-centric approach shapes the values of the municipality. The 6 values and the customer-centric approach define the character and the foundation on which leadership and employees behave and conduct decisions (Drakenstein Municipality Integrated Development Plan 2012-2017, 2012).

4.1.2. Environmental Management section

The Environmental Management Section previously operated under the Civil Engineering Department, but since the restructuring in 2014, it has been placed under the Planning and Economic Development Department. The section consists of a manager, a clerk, 2 senior technicians and 2 junior technicians. The purpose of the section is to prepare environmental policy documents, comment on environmental issues and compilation of environmental reports, environmental law enforcement and awareness raising (Drakenstein Municipality Integrated Development Plan 2012-2017, 2012). The section is also responsible to implement the Environmental Management System.

4.1.3. Interview methods

As part of the research study with regards to primary data collection, interviews were conducted with relevant sections. Interviews were done with the Environmental Management Section first, the two technicians felt that it would be beneficiary to the research if they were interviewed together; the manager of the section was interviewed separately. After the first interview was conducted with the section, they were asked to suggest who else should be interviewed with regards to this study, thus implementing the snowball effect of interviewing. They suggested that the Solid Waste Section, Civil Engineering Water Services Section, Spatial Planning Section, Heritage Section, Civil Engineering Design and Planning Section and the IDP Section to be interviewed as well as the Councillor who is responsible for the environmental management portfolio. Appointments were then made with the middle line managers of these sections, in the case where managers were not available; a senior staff member of competence was interviewed. Middle line managers were interviewed because on an operational level, they have the authority to initiate integration efforts, and efforts can be carried over to a strategic level through their input. Fortunately, all managers made the time available to be interviewed and only two senior staff members was interviewed. This did not affect the findings of this study. When asked why these sections were suggested, the

Environmental Management Section mentioned that these were the sections they are most likely to, or already have, integrated with.

All interviews took place during working hours within the Drakenstein municipal building at a time which best suited the interviewee's. Interviews were scheduled to last 30 minutes to accompany the busy schedules of the managers; some interviews lasted for an extra 5 minutes maximum with the consent of the interviewee. At the start of each interview, the research topic and aims were explained to the interviewee, they were then allowed to ask any questions with regards to this. Each interviewee was given a consent form and was given time to read through the form before signing it, they were also made aware that if they felt uncomfortable at any point in the interview, they need not continue. If they wished to remain anonymous it would be that way and they could withdraw from the interview at any point during and after it has taken place. No interviewees were forced to sign the consent form and were given the opportunity to decline the interview request. Once all questions were asked and there was a clear understanding of the research topic and aims, the consent form would be signed and the interview took place.

4.1.4. Other observations

Besides the interviews that took place, observations were also being done at the monthly Environmental Management Committee (EMC) meetings and the quarterly Natural Resource Reference Group (NRRG) meetings with the consent from the chairperson, Jimmy Knaggs, at both these meetings. Before each meeting the chair would make an announcement that observations were being done for research purposes and attendees were informed about the research. Knaggs agreed to sign the consent form on behalf of the group meetings so that observations could take place. The findings of these observations will be presented later on in this chapter.

In the section that follows the interview findings will be discussed first, followed by the observation findings. A segment named evaluations will discuss the evaluations made from the findings of both the interviews and the observations together. The evaluations will be discussed in terms of chapter 2, namely the coordination variables, types of integration, the factors for successful practice thereof and the tools that can be used to better integration efforts. A conclusion will then be written about both the findings and evaluations of this study.

4.2 FINDINGS

The questions asked during the interviews were based on documentation, human resources and goals of the municipal sections. Documentation refers to any relevant documents that the sections might use within their sections, and only documents of the municipality. This excludes any provincial, national or other stakeholder documentation because the focus of the study is on the internal integration of Drakenstein. Human resources refer to the officials within each of these sections and the roles they play with regards to internal integration. The goals refer to the goals of the sections interviewed. It was asked to see whether there is integration or common goals between the sections interviewed.

The interviews were conducted on the following dates and times with the following sections.

Table 4.1: List of officials interviewed

Name and Surname	Section	Date	Location
1. Cindy Winter	Environmental Management	21/09/2015	Drakenstein Office
2. Shaun Reece	Environmental Management	21/09/2015	Drakenstein Office
3. Sifiso Nkonyane	Civil Engineering Water Services	25/09/2015	Drakenstein Office
4. Chantelle De Kock	Heritage	28/09/2015	Drakenstein Office
5. Sonia Frans	Solid Waste Management	28/09/2015	Waste Transfer Station Office
6. Ashley Roelf	Spatial Planning	29/09/2015	Drakenstein Office
7. Neil Muller	Environmental Management	30/09/2015	Drakenstein Office
8. Faith Qebanya	IDP	1/10/2015	Drakenstein Office - Wellington
9. Councillor Dr Lourens Du Toit	Council – Environmental Management	1/10/2015	Council Office
10. Jimmy Knaggs	Civil Engineering Design and Planning	7/10/2015	Drakenstein Office

All the findings presented below are from the interviews that were conducted with these sections and will be presented under the 3 variables because the questions were themed according to the variables.

4.2.1 Documents

The interviewees were asked questions regarding their documentation used on a daily basis with reference to their section's documents and documents from sections they integrate with. The aim was to find out if there is awareness around documentation within the municipality and whether documentation from sections is set up in collaboration with other sections. Greater awareness increases the likelihood of sections working together because officials will move beyond their silo's and documents set up in collaboration will result in a more holistic end result.

4.2.1.1. Findings

It was found that there is no official system in place which encourages the awareness of documentation or updates thereof from one section to another. Most documents or updates were heard of through word of mouth as colleagues' converse with one another or when they are invited to, and attend meetings held by other sections. Often time officials are invited to public participation reviews of documents done by consultants. A good example of this is the Spatial Development Framework (SDF), which will be discussed later in this chapter. Some by-laws are also sent out for comment, but it is mostly only Council who comments on this. However, this is not the case for all section by-laws or documentation, some sections, even though seldom, do receive comment from other sections regarding their documentation.

Generally, the sections each work from their own documentation and national or provincial documentation related to their sections. There is thus limited integration with regards to documentation in the municipality. An overarching document such as the Integrated Development Plan (IDP) should play a huge role in raising awareness with regards to the functions and goals of each section. However, sections don't receive their goals from this document, but use it as a guideline instead. These guidelines are then used to inform the goals (performance targets) set by Executive Managers in their Service Delivery Budget Implementation Plans (SDBIP) which is more specific than the IDP. An SDBIP is given effect by the Municipal Finance Management Act (56 of 2003) (RSA, 2003), it entails aligning the goals (performance targets) with the approved budget, and gets done annually.

The SDBIP thus integrates the goals of each section with the budget of the municipality. Documents don't get integrated horizontally but are integrated vertically with strategic plans such as the SDF and SDBIP.

4.2.2 Goals

The interviewees were questioned with regards to what the main goals were for their relevant sections. The purpose was to identify whether there was a link between the goals of the different sections. Having a common goal is a step in the right direction with regards to integration. It makes integration less complex when everyone works towards the same common goal. With regards to the Environmental Management Section, their goals are those as set out in the Constitution (RSA, 1996). They also have key focus areas that they prioritise, such as the Berg River and aim to reduce risks associated with the river. Their goals are also identified from the IDP under the Key Performance Indicators (KPIs) and under the Key Focus Area (KFA) Health, Safety and the Environment. Another main aim is to deliver an integrated comment on environmental impact assessments and basic assessment reports. A Standard Operating Procedure (SOP) has recently been drawn up with regards to this. The Water Services Section base their goals on the National goals for water services and are also linked to the South African National Standard 241. The main goal for Waste Management is the collection of waste which is addressed in the Integrated Waste Management Plan, and to keep the town's open and public spaces clean and tidy which is addressed by its by-law. The main goal for the Heritage Section is to obtain competency from Heritage Western Cape. The Spatial Planning Section mentioned that all managers have an SDBIP in which they decide in detail, the goals that they want to achieve. However, this is not done in conjunction with other sections or staff members.

4.2.2.1. Findings

With regards to goals, they were asked whether there were any goals in regards to integration. All of the sections mentioned that they do attend and are invited to meetings within their section as these were seen as the main tool to integrate with each other. All the sections whom were interviewed are invited to the monthly EMC meetings. The Waste Section, Water Services Section, Heritage Section and Spatial Planning Section all have their own internal meetings which occur on an adhoc basis. These meetings are feedback sessions as a means to keep everyone up to date and encourage the sharing of information. These sections also

attend meetings held by National or Provincial government and external stakeholders but this will not be discussed in this research.

4.2.3 Human resources

The sections were asked questions with regards to human resources to identify who are the key role players for implementing or even just encouraging integration within the municipality, and to identify the role of staff members with regards to achieving successful integration.

It was found that the sections interviewed felt that integration was a top management issue in the sense that integration within a municipal setting works top-down and there needs to be buy-in from managers to encourage integration and to educate staff about integration. It was mentioned that managers need to build and maintain good relations with one another, this will result in better communication between sections and it also leads to increased visibility which encourages communication. The more those sections are informed about one another, the better the likelihood of integration.

Another important role player is the Executive Management Team (EMT). They meet every 2 weeks to discuss current issues within the municipality and ultimately determine the execution of municipal goals. The EMT needs to initiate or set the scene for integration within the municipality. One of the sections mentioned that for integration efforts to work there has to be buy in from the EMT due to the fact that officials receive their directions from the EMT, it was also suggested that each project needs to go through the EMT for discussion so that integration opportunities can be identified. Overall, integration needs to become a priority to top management.

4.2.3.1. Findings

With regards to integration between officials, all sections find it relatively easy to contact other officials, however, it was mentioned that integration efforts or attempts depends on the personality of the official. Some are more willing to help than others, while some still find it difficult to work outside of their silos. The Waste Section mentioned that it might be a bit more challenging to keep up with information flow or awareness with regards to projects due to them being stationed at the Waste Transfer Station and not in one of the two main municipal buildings. However, they do feel comfortable to communicate with other Sections

via a phone call or email. The Heritage Section mentioned that they find communication to be easy within the Section and between other Sections due to only having 2 staff members in their Section. Interviewees understood integration as communication and information sharing between the sections with regards to projects.

4.2.4 Processes

The sections were asked questions regarding their processes in the municipality, with specific regard to how they interact, communicate and integrate with other sections when necessary. The sections had different means of how and when they integrate.

4.2.4.1. Findings

The Water Section mentioned that it integrates with other sections within the Civil Engineering Department when they need to plan for projects; the sections in this department are forced to integrate because services always interact with one another. The issue however, is that once the integration has taken place in the planning stage, sections then tend to drift off into their silo's and stop communicating with one another. The Waste Section mentioned that emergency requests trigger integration. For example, the Premier was to visit the Mbekweni area in the Drakenstein area, they were given short notice of this event and since the Waste Section is responsible to only keep open and public spaces clean, they had to contact the Parks Section to clean up the parks in this area. This situation required integration due to the fact that the two Sections had to come together to find the most effective and efficient way to clean the area in time. The Heritage Section experiences integration when questions are asked from the section to other sections. Spatial Planning experiences integration within the Planning Department when their regular meetings take place and information and knowledge are exchanged. Projects also encourage integration within the department. Environmental Management experiences integration when they have their monthly and quarterly meetings which will be discussed later on in this chapter. They also experience integration when having to comment on the Environmental Impact Assessments (EIAs) and sometimes when having to do site inspections with other relevant departments, especially with the Civil Engineering Department.

Sections have split views with regards to whether integration happens reactively or proactively in the municipality. Some argue that integration happens on a reactive basis, due to the fact that when a project needs to be done then only integration is encouraged, whereas

other sections feel that integration happens proactively, because it is done in the planning stage of a project. They however, all agree that once the planning stage has passed, integration stops and sections start operating in their silo's once again. They all agree that integration happens on an adhoc basis as sections step on each other's toes, however, it is found to be often and necessary.

It was mentioned by the Heritage Section that they find the municipality operates on corporate memory, meaning that the integration that does take place happens as a result of certain people who act as champions when it comes to integration. These champions can be referred to as reticulists as described in chapter 2. These individuals are important to have in the municipality because they have a strong influence and attitude to achieve a desired outcome. However, a concern was that once these influential individuals leave the municipality then so do the systems they have created. It was mentioned that there is more of a people orientated approach towards integration rather than a systems approach that can be applied throughout, because not each section has these reticulists who essentially encourage integration. A systems approach as described by the interviewee is understood as an approach in which there are systems in place rather than having reticulists due to the fact that systems would last longer than people and if these reticulists leave their strategies can still be successfully implemented.

4.2.5 Meeting observations

Natural Reference Resource Group meetings:

Table 4.2. Observation schedule

DATE	VENUE
1 September 2015	Paarl

Environmental Management Committee meetings:

Table 4.3: Observation schedule

DATE	VENUE
5 August 2015	Paarl
2 September 2015	Paarl
7 October 2015	Paarl

4.2.5.1. Environmental Management Committee

Monthly Environmental Management Committee (EMC) meetings are held by the Environmental Management Section and chaired by Knaggs, the former Environmental Management Manager and includes all interested internal sections and external stakeholders who wish to participate in these meetings. Sections that are invited include one representative from the Planning and Economic Department, the Civil Engineering Department, Electrical Services, Community Services, Corporate Services and the IDP Manager and external stakeholders include any specialists that are required for input on an issue and the Councillor (Knaggs, 2003:2).

The aim of the meeting is to “achieve the well-being of present and future generations ... through the management of the environment in Drakenstein” (Knaggs, 2003:3). This aim is achieved by identifying and preserving the bio-diversity of the ecosystems within the Drakenstein Municipal area, engaging actively in environmental education, facilitating sustainable development and sustainable economic activity, practicing participative management and facilitating the appropriate recreational use of the conservation areas (Knaggs, 2003:3).

The main purpose of the meeting is to go through the minutes of the previous meeting and update or inform the members of any advances on these issues. The meeting has a few standard issues which are discussed at every meeting, these include collaborative environmental impact management, collaborative biodiversity conservation or GIS support which is related to alien clearance within the municipal area done by the municipality and other stakeholders. Drakenstein policy and management plans are also discussed with regards to any updates or new reports being done by the Environmental Management Section. Any legislative updates from Province or National government are forwarded to committee members. Collaborative environmental education and awareness raising efforts are discussed and lastly, any other matters arising are discussed in these meetings.

4.2.5.2. Natural Resource Reference Group

The quarterly Drakenstein Natural Resource Reference Group (NRRG) goals are to build capacity amongst each other and support each other where initiatives and responsibilities overlap and to share information and expertise (Knaggs, 2005:1). The members include the

municipal Environmental Management Section, the Department of Agriculture: Western Cape, Cape Nature, Department of Water Affairs and Sanitation, Biodiversity and Wine Initiative, Botanical Society of South Africa Conservation Unit and the South African National Biodiversity Institute (SANBI). It is required of the members to report back on any activities they are currently busy with in the municipal area.

4.2.5.3. Findings

The main focus of the observations was to see the manner in which integration was practiced in the Environmental Management Section and to evaluate whether they were successful. Based on the observations done at both the EMC and the NRRG meetings stakeholders were given feedback on the standing issues. The chairperson would speak most of the time when going through the minutes except when another section or stakeholder issue needs to be updated. The type of information shared is usually any projects that are done or planned for the municipal area, contracts that are running, feedback or awareness on forums or meetings taking place, clear understanding of how projects work or guidance as to what is the best way to approach a project or address an issue. These monthly and quarterly meetings hence create an opportunity to discuss projects that overlap one another.

The main advantage of having the EMC and NRRG meeting is that it keeps the members up to date so that they may do their work more efficiently and effectively. It creates a great opportunity for networking and information sharing. There are however, a few disadvantages or hindrances to the success of these meetings. Managers aren't likely to attend these meetings and send a staff member with lesser knowledge instead, Managers don't attend due to time constraints and the same applies to external stakeholders as these meetings have no time limit set to them. These meetings range between 30 min to an hour and a half. Lastly, not all that are invited to attend actually attend these meetings. Thus, important stakeholders are not guaranteed to attend. Attendance is thus an issue hindering the success of these meetings.

Overall, the Environmental Management Section has to integrate with other sections as the environment is a component that in some way or the other effects the operations of the sections that were interviewed. The documents, goals and process need to be integrated to achieve a holistic approach. The findings gathered from interviews and observations will now

be evaluated in context of the theoretical underpinnings of integration as discussed in chapter 2 and in context of Drakenstein Municipality.

4.3 Evaluation

The findings presented above can be classified as raw information gathered through the interviews that were conducted. To be able to understand these findings in context of the research topic it will be evaluated below in terms of various themes. These themes are derived from chapter 2. The findings are then discussed under these themes to get an understanding of how and if the theoretical theories of integration are applied within Drakenstein Municipality. By doing this gaps can be identified and suggestions will be made later on in the study as to how Drakenstein Municipality could address these gaps with the hopes of increasing integration if necessary.

4.3.1 Coordination in Drakenstein Municipality

The first theme refers to coordination which in chapter 2, has been introduced as a synonym for, and a key operational element of integration within this study. Coordination refers to the common understanding, synergies and interdependence between the sections of the municipality. The 6 coordination variables as discussed are the scope of coordination, positions, boundaries, authority, information and the process in which decisions are made. To better understand the level of integration, the findings will be evaluated to identify which of these variables exist within Drakenstein Municipality.

Table 4.4 Evaluation of coordination variables

Theme	Evaluation
Scope of coordination	<ul style="list-style-type: none"> • Each section uses their own documentation and seldom to never use the documentation of other sections. • The setting up of documents for section operations are done in isolation from other sections • The EMC and NRRG meetings are used as a means to coordinate • Relevant sections are invited but attendance is not guaranteed due to the meetings not being enforced by top management • Hence, the importance thereof is not recognized • Boundaries and silo's need to be broken down so that processes become more integrated and scope increases • Integrated documents and human resources lead to integrated processes, however, this is not currently happening
Position	<ul style="list-style-type: none"> • Interviewees felt that top management play an important role in the success of integration • The different sections also need to understand the role each of them play when it comes to implementing integration practices. • A good example of an attempt at integration that informs the sections of the role they play and is recognised as a means of integration is the SOP (Annexure 7) for commenting on environmental applications.
Boundaries	<ul style="list-style-type: none"> • Invisible silo's and boundaries need to be broken down so that information can be shared. Inviting relevant sections to participate in problem solving and decision – making relevant to their sections expertise encourages the boundaries and silo's to be broken. • The NRRG and EMC meetings play their role in breaking down silo's and boundaries but was observed to be more of a feedback session with limited interaction and integration was not guaranteed afterward. • Sections need to coordinate to breakdown boundaries, meaning a common understand needs to be achieved and synergies need to be created so that they become interdependent.

	<ul style="list-style-type: none"> • Qebenya (2015) mentions that integration is unintentionally and informally happening in the municipality as sections need each other because there is no planning or strategic methodology that formally supports integration. Thus integration happens to an extent but is not sufficiently coordinated.
<p>Authority</p>	<ul style="list-style-type: none"> • Sections felt like integration was a top-down management issue because of the top-down structure of the municipality. • Sections mentioned that the top-down structure plays a role in influencing how sections integrate. • It was mentioned that Qebenya (2015) that the Municipal Manager is the tone setter for integration in the municipality, along with the Executive Management Team (EMT) in terms of long-term forward planning. Thus, IEM should be a topic of discussion in these meetings. • The Chief Financial Officer (CFO) was also identified as a key role player in terms of the budgeting process that has an effect on the municipal strategic plans (Roelf, 2015). The CFO can encourage that better integration saves time and money and avoids costly mistakes. • Middle management is recognized as an important role player as well as it is the level of management that is closes to “ground” level where the implementation of integration happens. Drakenstein Municipality is fortunate enough to have a string and mature management who understands integration.
<p>Information</p>	<ul style="list-style-type: none"> • Top level management needs to be informed about projects so that integration opportunities and efforts can be identified and awareness can be created. • Better integration leads to more information sharing which results in better decision making. • It was mentioned by the environmental technicians that usually a general consensus approach to decision-making is taken at the EMC and NRRG meetings when necessary. • A general consensus approach is an example of coordination and mutual understanding if the sections involved have given valuable information and input.

Overall, Drakenstein Municipality has a limited scope of coordination, positions need to be identified for a clearer understanding and management of integration efforts, boundaries need to be broken down, top management needs to be informed of integration attempts and issues should be taken up with them regarding integration so that they can understand the urgency of the matter and information needs to be shared with them and the rest of the municipality so awareness can be created.

4.3.2 Type of IEM in Drakenstein Municipality

The municipality can decide which type of integration it needs to implement. There are of course ideal types that foster better integration results than others. The municipality can either decide to approach integration reactively, preventatively or proactively. It can either be internal integration that takes place or external integration, integration can either happen on a strategic level or an operational level as discussed in chapter 2.

4.3.2.1. Reactive, preventative or proactive

There seemed to be different views from the sections with regards to whether integration happens reactively or proactively in the municipality. Some sections felt that integration happened reactively because it is only encouraged when a project is underway, and an issue needs to be addressed or when sections step on each other's toes. One other section feels that integration happens proactively because it is done in the planning stages of a project. Either way, integration occurs once a project or issue has been identified. For integration to be classified as reactive an environmental issue or project should have already occurred, for it to be proactive then the issue or project integration efforts are made where environmental issues are anticipated. It is possible that both reactive and proactive integration occurs within the municipality. Reactive integration in practice would be when one section has already commenced with a project during which an environmental issue arises and the Environmental Management Section gets notified thereof. Proactive integration would be when another section informs the Environmental Management Section of a project and requires their skills and knowledge to be more adequately informed and make better decisions before the commencement of the project. Ideally, more proactive than reactive integration should occur so that anticipated environmental issues in a project, whether it be a project from another section, can be identified and dealt with before it occurs. Currently, the municipality practices both types of integration.

4.3.2.2. Internal

Internal integration (internalisation as discussed in chapter 2) refers to the integration of all the documents, human resources and goals within the municipality. This integration can either be done on a strategic level where structural (proactive approach) changes take place to achieve better integration, or on an operational level (reactive approach) where implementation happens. Internal integration occurs when Environmental Management functions are considered important for the operational function of other sections. The Environmental Management Section objectives should not only be prominent within the section, but should be prominent within all the sections that are affected by the environment. Thus, the sections functions get internalized into the functions of other sections. Environmental concerns are then integrated across a horizontal and a vertical level. The Environmental Manager at the municipality, suggested that there should be a shift of disciplines in the environment so that there is not an Environmental Management Section per se, but rather environmental functions within different sections (Muller, 2015). For example, have a climate change function within the Spatial Planning Section and/or an air quality function in the Waste Section. Environmental functions should be spread out and put into sections that need them the most. In this manner, the silo is also broken and a bridge is built between functions and sections. This would also create an opportunity for the integration of environmental documents, goals and human resources into other sections. To be able to achieve this, an internal structural change would need to take place and strategic level by-in is necessary because the sections identified would need to be restructured. Currently, integration only happens on an operational level in a reactive manner because there are no structural planning methodologies for integration in the municipality. Operational integration is better than no integration at all, but having strategic integration efforts ensures that integration will happen whenever it is necessary; it also has the potential to identify integration opportunities within the municipality.

4.3.2.3. External

The next type of integration is external integration; this refers to integration outside of the sections of the municipality. Although the Environmental Management Section has been integrating with external stakeholders such as Provincial and National government, interested and affected parties with regards to the environment and the general public, this study is particularly focused on the internal integration between the Environmental Management Section and other sections within the municipality only. External integration on a smaller

scale in a smaller setting can be understood as integration that happens across sections horizontally and vertically. A form of external integration is decentralization of the environmental functions; the above mentioned idea by the Environmental Management Manager is a good example of integration that is both internal and external. It is internal because the environmental section human resources, goals and documents will be integrated into other sections and external because the section will become decentralized and silos will be broken with regards to the environment. In other words, external integration takes internal integration one step further, but before one can achieve external integration, you first need internal integration.

4.3.3 Factors for successful practice

4.3.3.1. Initiation

The first factor for successful practice is initiation which entails the legal, institutional and organisational elements that encourages integration. The legal element refers to the laws or policies that prescribed integration. As discussed in chapter 3 there are a number of laws that prescribe integration in an organisation such as Agenda 21, the Constitution, the Inter-governmental Relations Framework Act (13 of 2005) (RSA, 2005), National Environmental Management Act (107 of 1998) (RSA, 1998), Municipal Systems Act (32 of 2000) (RSA, 2000). Drakenstein Municipality also participates in National forums where issues are discussed that involve local municipalities wherein experiences and best practices are shared and information is gathered (Drakenstein Municipality, 2014:39). The municipality has also entered into a Climate Change Partnership with Neumarkt in Germany. It revolves around Climate Change related aspects and involves municipal development, cooperation, migration and development on a local level (Drakenstein Municipality, 2014:39). There are also integration efforts between Provincial government and the Environmental Management Section of Drakenstein Municipality such as the Air Quality Officers Forum, the Berg River Improvement Project, Berg River Partnership and the Berg River Quality Task Team, Municipal Outreach Project regarding the commenting on environmental applications, Climate Change Mitigation and Adaptation Forum, SMART agri as well as various adhoc integration initiatives regarding environmental issues in the Drakenstein Area. The municipality participates in the Premier's Inter-Governmental Forum, Provincial Speakers Forum, SALGA Technical Working Groups and the Communications forum. In these forums, issues pertaining to service delivery and, matters of common interest are discussed, information and best practices are shared and the interaction between the Western Cape

Government and other municipalities are valuable to ensure better cooperation and coordination (Drakenstein Municipality, 2014:40).

The institutional element refers to the resources necessary to achieve integration such as staff, funds and facility resources. The municipality has got the staff and the facility resources to facilitate integration. It was however mentioned that the Finance Section should also be included into integration efforts so that the budgeting process can be aligned with project planning. This is achieved through the SDBIP. Drakenstein Municipality thus has all the resources necessary to achieve full integration.

4.3.3.2. Operation

The second factor is operation; it entails communication, decision-making, conflict resolution, consultation, research and data. The municipalities Environmental Management Section mentioned that they don't experience any problems when trying to communicate with other sections and vice versa. They mentioned that it is important that Managers from different sections have good relationships because this leads to information sharing, a better chance of integration and an overall better understanding between the sections. Communication is easily done in Drakenstein Municipality. With regards to decision-making, conflict resolution, consultation and research and data, if communication is successful then operation is on the right track. Better communication leads to better operations as can be shown in the Klapmuts North SEA and waste-to-energy project conflict situation. The waste-to-energy project (Waste Section) identified a site in Klapmuts as a potential area for the project. At the time the Spatial Planning Section conducted a Klapmuts North SEA, the SEA identified the site for another purpose. This clash was only found out when the SEA was done. The Spatial Planning Section then contacted the Waste Section to discuss the issue and eventually it got solved. An understanding was reached between the two sections and it was successful because of good communication practices and willingness from both sections to cooperate and share information so that the issue may be resolved. In this case, even though integration was reactive, it was still successful.

4.3.3.3. Outputs and outcomes

Lastly, outputs and outcomes, this describes successful integration practices wherein familiarity, common goals and a mutual understanding (Margerum, 1999:159) are achieved. Margerum (1999:162) also suggests that ideal integration is achieved from a bottom-up

approach and that it is important to have strategies in place that encourages ongoing integration. Other factors necessary to include into integration are information resources, the integration of environmental concerns into governance, vertical planning and management and assessment tools to assist the integration efforts as discussed in chapter 2. Drakenstein Municipality has the resources necessary to integrate, current operations indicate that integration is happening on a low key scale in the municipality and the interviewee's agree.

4.3.4 IEM tools in Drakenstein Municipality

Drakenstein Municipality has a variety of strategic and operational tools and documents that is used by the Environmental Management Section, such as the Integrated Development Plan (IDP), Spatial Development Framework (SDF), Environmental Management Framework (EMF) and Strategic Environmental Assessment (SEA and Environmental Management System (EMS). These tools all play an important part in facilitating integration and carrying environmental concerns over to other sections.

4.3.4.1. IDP

The IDP is the overarching planning document and strategic planning instrument of the municipality. It has Key Performance Areas (KPA) which is made up of Key Focus Areas (KFA), which are focus areas under a performance area. The KPA are identified by taking into account the political, national, provincial and district policies and plans, the following KPA were identified for Drakenstein Municipality:

1. Governance and stakeholder participation.
2. Physical infrastructure and energy efficiency.
3. Services and customer care.
4. Economic growth and development.
5. Health, safety and the environment.
6. Social and community development.
7. Institutional transformation.
8. Financial sustainability.

The Environmental Management Section falls under the KPA 5: Health, safety and the environment with the strategic objective “to contribute to the health and safety of communities in Drakenstein through the proactive identification, prevention, mitigation and management of health including environmental health, fire and disaster risks” (Drakenstein

Municipality Integrated Development Plan 2012-2017, 2012). Under this KPA, Environmental Management is KFA 33 and it states that overall the Environmental Management Section is responsible “to prepare environmental policy documents, comment on environmental issues and compilation of environmental reports, environmental law enforcement and awareness” (Drakenstein Integrated Development Plan 2012-2017, 2012). There is no mention of an activity to integrate environmental issues and awareness across the municipal sections. It however, goes further to mention that the Environmental Management System (EMS) that was implemented in 2008, integrates environmental functions of all sections and ensures that the functions are complying with environmental legislation. There are a number of plans that are linked to the EMS such as the State of Environment Report, Air Quality Management Plan, Biodiversity Policy, Environmental Policy, Water Services Development Plan, Integrated Waste Management Plan, Integrated Transport Plan, Spatial Development Framework, Local Economic Development Strategy, Integrated Human Settlement Plan and the Disaster Management Plan. This means that each of these plans have a checklist in the EMS to identify whether the municipality has been complying with the plans and frameworks.

The municipality also has an Intergovernmental Relations Forum under KFA 2: stakeholder participation under KPA 1: governance and stakeholder participation. This forum “facilitated the process of forging partnership and strengthening relationship with the sector departments to ensure that there are horizontal linkages” (Drakenstein Municipality Integrated Development Plan 2012-2017, 2012). This forum is more focused on external integration (with external stakeholders) and promotes collaboration and coordination of projects running throughout the Municipal area.

4.3.4.2. SDF

Another strategic planning tool is the Spatial Development Framework (SDF) that spatially integrates the various objects within the municipal area. Integrated Environmental Management (IEM) was identified as Theme 1 in the SDF. The objective for this theme is to ensure integrated management and prioritization of the municipality’s natural and man-made cultural landscape resources, to facilitate disaster risk management in alignment with biodiversity management programmes and to align investment and resources for coordinated environmental management projects (Drakenstein Municipality, 2015:25). Integration was also identified as a principle under this theme. One of the implications identified was the

coordination of internal municipal departments responsible for Environmental Management (Drakenstein Municipality, 2015:25). This indicates that even though the planning document aims to achieve better integration, the actual implementation thereof might be a challenge.

The SDF is overall a great implementation tool as can be seen from the Drakenstein Municipality SDF. The SDF themes that were identified are aligned with the 8 IDP Key Performance Areas. The SDF theme's 1 and 2 respectively are aligned with the IDP's KPA 5: Health, safety and the environment. Secondly, the Environmental Management Framework (EMF) was also integrated into the SDF for the purpose of identifying critical biodiversity areas within the municipal area; these are the areas in which no development will be allowed, thirdly, it incorporated the Environmental Management Section aims. This is a good example of how various documents can be used and overlapped to inform and create a more integrated document in which multiple sections and their goals are coordinated. The SDF is used by all the sections under the Planning and Economic Development directorate within the municipality.

4.3.4.3. EMF

Drakenstein municipality also has a Final Draft Environmental Management Framework in which the primary objective is to support environmental decision-making. An EMF refers to information and maps that specify the attributes of the environment that can be used in impact assessments so that a more detailed and integrated document can be compiled which will result in a more integrated decision. In this manner it gives effect to the objectives of IEM as set out in chapter 5 of NEMA (RSA, 1998).

The information provided in the EMF is to be used by authorities, but can also be used by the different sections in the municipality. This information is important for land use and development decision-making. If all the necessary information and maps regarding environmental attributes are compiled into one document such as the EMF then, common information will be used amongst those who need to make environmental decisions. In this manner effect is given to cooperative governance. On a more strategic level of integration, the information in an EMF must be used to inform both the SDF and the IDP, carrying the common information over into these 2 strategic planning tools. The EMF is an environmental decision-making tool that is integrated into these strategic planning tools, hence integrating the environmental component into them. Drakenstein's EMF informs the IDP where it seeks to take a conservation approach, such as wanting to achieve minimal intervention in areas of

natural, historic and cultural significance, the concern for visual quality of the landscape, recognition of the importance of agriculture, the protection of the quality and ambience of the towns and the protection of the right of individuals to access natural areas (Western Cape Government-Environmental Affairs and Development Planning, 2015:74). The Drakenstein SDF has to ensure core areas of high biodiversity value, protect and develop biodiversity networks and corridors, maintain aesthetics, protect heritage resources and agricultural potential as well as water resources (Western Cape Government-Environmental Affairs and Development Planning, 2015:75). The EMF was thus used as a tool that informs the SDF of these matters.

4.3.4.4. SEA

A Strategic Environmental Assessment (SEA) was done for the Wellington Industrial Area and the Klapmuts area in Drakenstein. An SEA develops a clear vision and plan for a site and can be seen as an “instrument for integrating environmental issues into the formulation of policies, plans and programmes at an early stage of planning” (Worley Parsons, 2014:14). The SEA’s that have been done in the Drakenstein area incorporates the interventions of the SDF (Worley Parsons, 2014:44), thus the SDF informs the SEA and gives it strategic direction. Any land uses identified in the SEA needs to take into account the interventions in the SDF. In this manner, the SDF and the SEA are integrated, and once again an integrated planning decision can be made from an integrated strategic document. The IDP has also been integrated into the SEA’s that have been conducted in that key points from its mission statement was recognized and integrated into the document (Worley Parsons, 2014:46). Key Performance Areas (KPA) relevant to the studies done were also identified and considered. Under each of the KPA’s there were Key Focus Areas (KFA) that were identified as well. The SEA thus took into account the two main strategic frameworks and integrated that information into the study so that a more holistic document could be developed, also the use of common information throughout all the documents developed helps to keep a consistent trend or golden thread throughout the different tools used in the municipality.

4.3.4.5. EIA

Lastly, an EIA will be done if a development triggers one of the listing notices under the NEMA EIA Regulations. The EIA or Basic Assessment Report will then need to incorporate all the information of the above mentioned tools into one comprehensive document that goes through a public participation process. Commenting on EIA’s is one of the major functions of

the Environmental Management Section and part of the process in commenting on it is to make sure that the development is in line with the aims of the IDP, SEA, EMF, and SEA for the area, so that a coordinated and integrated decision can be made based on the environmental attributes and future vision of the municipal area. The EIA is an operational tool because, it is reactive and needs to be informed by the proactive strategic tools of the municipality. The importance of these strategic tools for better IEM should not be underestimated because without these tools, an informed integrated decision cannot be made.

4.4 CONCLUSION

To conclude this chapter, the current situation in Drakenstein Municipality with regards to integration is as follows:

Table 4.5 Evaluation of the 3 variables

Documents	<ul style="list-style-type: none"> • The sections each work from their own documents that are set up in isolation from other sections. • There is no official system in place that notifies the other sections of document up-dates, most are known by word-of-mouth
Goals	<ul style="list-style-type: none"> • Each section has their own set of goals they work towards, these goals are not integrated with the goals of other sections to create a common goal. • Common goals are present on a project level when integration happens on an adhoc basis, but it not present on a strategic level.
Human resources	<ul style="list-style-type: none"> • Top management has a role to play in integration due to the top-down structure of the municipality. The EMT also has the authority to initiate integration. • Some officials are more open to integration than others.
Processes	<ul style="list-style-type: none"> • Integration was found to happen during the planning stages of a project, or as the need therefore is identified. But integration is not guaranteed to occur after this stage • Integration is adhoc as it occurs when questions are asked or when sections step on each other's toes. • Information is shared during monthly meetings • There however, is no systems approach to integration.

Meeting observations	<ul style="list-style-type: none"> • The meetings were more of a feedback session, with little interaction and engagement, although attendees were encourage to participate. • Mostly technicians who attended these meetings • Integration is not guaranteed afterward.
----------------------	---

It was mentioned by the sections that the EMT acknowledges the silo's that the officials are currently working in and it was suggested at one of their meetings that the silos are kept, but bridges are built between the silo's on which integration can happen. However, no further suggestions were made regarding this. There needs to be better integration regarding section documents, position and authority needs to be used to break down boundaries and information about integration efforts needs to be spread across the municipality.

Currently, the municipality practices both reactive and proactive integration efforts, but mostly internal integration is reactive and only happening on an operational level as required necessary by sections. Ideally, integration should happen on the strategic level as well, so that integration can be more proactive.

Overall, Drakenstein Municipality is integrating. Sections are sharing information, reaching mutual understandings, communicating when necessary, they are able to reach common understandings and they have the facilities available and the legal background that they need to adhere too. They do have really good integration successes such as the Drakenstein SDF, the Drakenstein EMF, the Wellington SEA, the Klapmuts North SEA and the SOP for commenting on environmental applications. Environmental concerns are integrated really well into these documents on a strategic level. Both the Environmental Management Committee and the Natural Resource Reference Group are good platforms on which stakeholders are able to ask questions, share information and get a clear picture of where integration efforts are concerning joint efforts or projects. It presents the opportunity to strengthen partnerships between the municipality and other stakeholders, as well as between municipal sections. However, both operational level and strategic level integration can be improved to achieve a well-rounded integration effort in Drakenstein Municipality.

CHAPTER 5

CONCLUSION

5.1 INTRODUCTION

This chapter will summarise the findings and evaluations discussed in chapter 4, in relation to the theories and legislative background regarding integration. Further it will conclude that Drakenstein is partially integrated and the reason thereof is based on the findings and evaluation of the documents, goals, human resources, process and the organisational design which are discussed here. These evaluations are used to indicate which level of integration currently exists in the Municipality (See figure 2.1 by Bernardo *et al*, (2009:744) presented in chapter 2). Hereafter, the reasons for fragmentation, which hinders integration, are discussed. To conclude the study, the recommendations, limitations and future research ideas are given.

5.2 DRAKENSTEIN MUNICIPALITY ORGANISATION STRUCTURE AND DESIGN

Drakenstein Municipality's organisational structure can be identified using the 3 variables of complexity, formalization and centralisation as discussed in chapter 2. Once the structure has been identified, the current organisational design can be identified too.

5.2.1. Complexity

Complexity is made up of the horizontal, vertical and spatial differentiation in the municipality. On a horizontal scale, the municipality has a diverse set of skills, which is expected from a municipality because of the wide range of issues they have to manage in a 1 538 km² area. These skills are grouped to form a wide variety of sections; the sections can be seen in figure 5.1 below. Vertically, the municipality can be identified as a narrow and tall structure, because it is characterised with tight controls, close supervision and complex communication lines that municipal officials need to follow. A tall structure thus works best in this case because the Middle Line Managers play a facilitator role in all of this. Spatially, the municipality has two main buildings. The Civil Engineering, Spatial Planning and Land Use Application Section are grouped together in one building, and the rest of the functions are in another building. This works because the planners and engineers integrate often and it

makes communication easy because they are within the same building. However, this Section often needs to communicate with the Finance Section and especially Supply Chain Management. Even though communication is fairly easy via a telephone or email, if there is a miscommunication or documents need to be fetched, the officials have to take the time to get to the other building for communication purposes. There are also depots outside of the official municipal buildings, such as the Waste Section Depots, Parks Section Depots and an office on Paarl Mountain. However, these depots are located closer to their working areas for convenience purposes. Overall, with regards to complexity, the municipality has complex communication lines due to high horizontal and high vertical differentiation. The tall structure that is characterised by tight controls and close supervision can be both an advantage and disadvantage to integration depending on the organisational design.

5.2.2. Formalisation

With regards to formalization, it is difficult to evaluate whether standardization is high or low due to the fact that it differs at different levels and within different sections. Some functions have set procedures that need to be followed while functions that need to be done in a lesser controlled environment are lenient in this regard. For example, when the Environmental Management Section does a site inspection, the actual inspection is low in standardisation, but if further steps need to be taken, like a pre-compliance notice needs to be drawn up, then a higher level of standardisation is present. Sections also follow Standard Operating Procedures (SOPs) to perform their function, such as the environmental application SOP. The municipality as a whole has rules, procedures and policies it needs to follow and thus standardisation is high.

5.2.3. Centralisation

Drakenstein municipality is centralised because decision-making is done by top level management, namely the Executive Management Team (EMT) and any plans, by-laws or documentation needs to be accepted by Council and then approved by Council. There are stringent lines of communication that needs to be followed at all times.

Overall, the municipality has complex communication lines accompanied by high vertical and horizontal differentiation. Spatial differentiation does exist but the sections interviewed find it to be manageable. The municipality has a high level of standardisation due to the rules,

procedures and policies that need to be followed, and decision-making is highly centralised. This brings us to the organisational design of the municipality.



Figure 5.1: Organisational Structure

Source: Drakenstein Municipality Integrated Development Plan 2012-2017, 2012

Figure 5.1 depicts the macro organisational structure of the municipality and the communication lines that need to be followed. There are sections within the 5 directorates which report to the Executive Managers of the directorate there in, these 5 directorates then report to the Municipal Manager who reports directly to the Executive Mayor. Under each of the directorates, the sections each have their own organisational design. See Annexure 8 and 9 for the organisational design of the Planning and Economic Department and the Environmental Management Section within the department.

5.2.4. Machine Bureaucracy

The Environmental Management Section has to follow the vertical lines of communication, thus the 2 junior and 2 senior technicians report to the Manager who then reports to the Executive Manager, who can take issues to the EMT and it gets reported to the Municipal Manager. There is thus a vertical chain of command running through the section. This flow of

information indicates that work is much standardised in that certain procedures need to follow with regards to coordination and control of the workflow. The section operates on its' own and not in conjunction with any other section; the section thus has its' own set of functional goals. This current organisational design can be classified as a machine bureaucracy.

It is clear that the organisational structure in the Infrastructure and Planning directorate follow a machine bureaucracy organisational design because the directorate has specialists grouped together within it. These groups all have to follow the same chain of command that runs vertically to the Executive Manager, through the Planning department to get to the Infrastructure and Planning directorate and then to the Municipal Manager. This applies to all the other directorates as well. A number of machine bureaucracies are grouped together that are coordinated at a central point, which in this case would be the EMT or the Municipal Manager characterises a divisional structure. A divisional structure is decentralized with coordinated control by Middle Managers, it practices a high degree of formalisation, however complexity is high as well with regards to coordination because it proves to be challenging to get the smaller machine bureaucracies (sections and even departments) to coordinate horizontally and this is the current situation in the municipality. Divisional structures are ideal for large organisations with multiple markets due to it having a wide horizontal differentiation. The divisional structure is the current organisational design of the municipality.

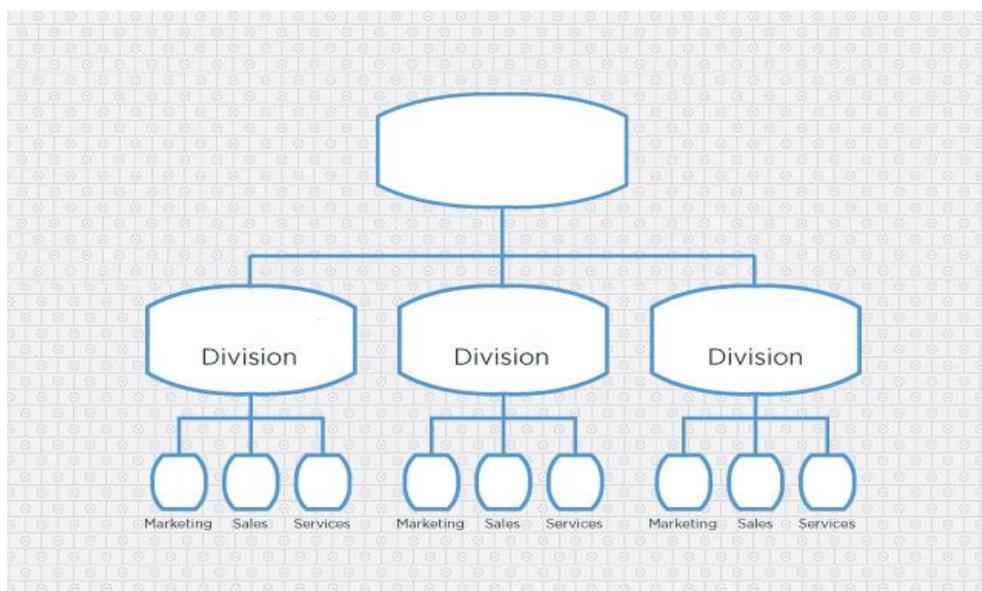


Figure 5.2: Divisionalised structure design

Source: Adopted from The pros and cons of 7 popular marketing organizational structures (with diagrams), 2015

5.2.5. Adhocracy

Within this divisional structure and the machine bureaucracy the sections do have adhocracy (ad hoc) organisational designs that assist them with coordination efforts to address an issue. These ad hoc meetings or organisations within the municipality only last until the issue is resolved. It is a means to bring together the pool of experts in the different sections and even in different directorates. In this manner adhocracy is a useful tool to try and combat the high level of horizontal differentiation and to a certain extent vertical integration in the municipality. It helps to address the coordination challenges of the divisional structure.

5.3 DRAKENSTEIN MUNICIPALITY DEGREE OF INTEGRATION

The findings and evaluation as discussed in chapter 4 will be used to determine the current degree of integration in Drakenstein Municipality. The degree of integration will be determined using the degrees of integration figure 2.1 discussed in chapter 2. There are 2 overarching degrees of integration, namely partial integration and full integration. Partial integration is characterized by harmonization, cooperation, integrating, correspondence and generic processes. Full integration is characterised by amalgamation and integrated documents. Integration ranges from level 0 which is no integration to level 3 which is full integration.

Level 0 integration refers to documents that are combined. This means that the organisation has identified the separate documents, goals and policies that are being utilized at the same time. These documents, goals and policies have not been integrated; they have just been identified as a potential integration opportunity.

Level 1 integration refers to partial integration, which is refers to simple collaboration, alignment and harmonisation. Harmonisation can be understood as bringing together the documents, policies and goals identified in level 0 and integrating them by means of finding a common element amongst them. If the documents, policies and goals of each section are harmonised then cross references of this integrated document, policy and goal can be made across sections. It makes it easier for sections to identify their compatibility with one another, because documents, policies and goals of a section are aligned. In this manner internal coordination occurs.

Level 2, integration is when there is full cooperation from all sections with regards to the integrating of their documents, policies and goals. Each section has already completed level 1 of integration and now those harmonized documents are to be generically integrated so that a broad integration strategy can be implemented. At this level of integration, integration needs to be characterised with focused interrelations between sections, interrelated objectives between sections and a centre point for collaborative efforts needs to be determined. To be able to get such a generic focus, integration efforts are usually more strategic before it can be operational.

Level 3, integration is full integration in an organisation. This means that documents, goals and policies of a section lose their unique identities and become completely amalgamated. At level 3 integration, employees have been assigned merely for integration purposes. Integration is a strategic element that happens on a proactive basis within each section and throughout the entire organisation, a culture of learning and integration has been established, there are continuous improvements in this regards and continual stakeholder involvement.

Table 5.1 Levels of integration

Level 0	Drakenstein Municipality is not a level 0 integration case because it has taken a step further by integrating the key sector plans. A good example of this is the SDF, in which both the EMF maps and information and the IDP KPI's and KFA's were integrated into. With regards to goals, the sections are still focused on their section goals and these goals are not integrated, even though all sections work toward a common vision for the municipality.
Level 1	The Environmental Management section has strategic tools in place that allows for partial integration. The SDF and Wellington and Klappmuts North SEAs are good examples in which documents, Policies and goals for environmental management are incorporated into a single document that is used by the Spatial Planning and Land Use Management departments. The human resources component still lacks continuous integration due to integration only happening on an adhoc basis.
Level 2	Integration efforts in Drakenstein Municipality are more operational than strategic. Integration also occurs on an adhoc basis as middle line managers find it necessary and as they have the resources to implement it. Integration is thus not consistent because it is not strategically encouraged from top management.
Level 3	Level 3 integration would not be ideal for a government organisation because it requires all documents and goals to lose their unique identities and become completely amalgamated. Human resources would then only be assigned for integration purposes, the specialized functions required by the differing sections would be lost and thus this level is not suited for the municipality.

Considering all the levels of integration discussed here and further information thereof as presented in chapter 2 as well as the findings and evaluations in chapter 4, Drakenstein Municipality can be concluded to currently have achieved a level 1 integration, hence partial integration. A level 2, integration is possible to achieve for the municipality if integration was encouraged throughout the municipality. However, a level 3, integration does not seem ideal for a municipal setting due to the fact that the municipality has to provide a wide variety of services, which means that a wide variety of skill sets and professionals are needed. Losing the unique identities of these services and sections could cause more chaos than integration for the municipality. Perhaps the suggestion made by the EMT regarding the silo's and building bridges between the silo's on which integration can happen is ideal based on the organisational structure and design of the municipality.

The Environmental Management Section itself however, can be classified as Level 2 integration in some of its integration efforts. The Section already work with documents that are integrated (SDF, SEA, SOP) and these documents implement integration efforts within the section. It encourages the section to use Spatial Planning and Land Use documents in their environmental functions, such as commenting on EIA's or drawing up environmental documentation for the municipality. The section already has a centre point for collaborative efforts, namely the EMC and NRRG meetings. These meetings encourage interrelations and thus integration between the sections that attend. Once these interrelationships are formed, then sections can start identifying interrelated objectives. If each section achieved a level 2 integration level in the same way as the Environmental Management Section does, then Drakenstein Municipality overall could achieve level 2 integration.

5.4 REASONS FOR FRAGMENTATION

The reason why organisations integrate is due to fragmentation that causes multiple issues such as implementation gaps, congested decision-making, conflict, displacement of responsibility and duplication and misunderstandings. As identified in chapter 2 the main causes of fragmentation are policies, the scope of vertical and horizontal lines and specialisation and knowledge.

5.4.1. Documents and plans

With regards to Drakenstein Municipality, policies are not the main cause of fragmentation but rather the documents and plans from various sections that are currently not integrated. The Environmental Management Section EMF has been integrated into the spatial planning's SDF. This is a good example of how documents should be integrated. However, only the SDF has taken cognizance of the EMF. Being a strategic document, other documents should take cognizance of the EMF as well. All strategic level documents or plans relevant to one another should be integrated. Getting these documents integrated is a complex situation itself in that the number of documents and the wide variety of issues that needs to be addressed makes the task so much more complicated. However, top level management and middle line management should identify the sections that are most affected by the environment and integrate environmental policies, plans and documents into an environmental implementation plan for all sections. In this manner all the environmental policies, documents and plans are integrated into one generic document.

5.4.2. Scope of vertical and horizontal lines

The next reason for fragmentation is the scope of vertical and horizontal lines. As can be seen with the current organisational structure in the municipality there is a high vertical and horizontal differentiation between sections, between top management and lower management and hence between strategic level and operational levels as well as between sections. This makes integration more complex in that a wider scope of coordination has to be managed, which means that a wider scope of policies, documents, plans, human resources, information, processes, positions and boundaries and authorities need to be managed and brought together to a central point at which integration is supposed to occur. The Environmental Management Section has attempted to create such a central point in which these variables could all come together by having the monthly EMC meeting and quarterly NRRG meeting. This is a good tool for integration purposes; the only hindrance is the willingness of the officials to participate.

5.4.3. Specialisation and knowledge

This leads us to the final cause of fragmentation which is specialization and knowledge. Sections do not find integration to be part of their expertise or even within their job descriptions. Integration is just recognized as something that needs to be done to complete a project. It is not understood as an advantage that could better communication and interaction throughout the municipality. The professionals within each section only concentrate on what they specialize and on what they know, they thus tend to work in isolation from one another and are only concerned with one issue. This is currently happening in Drakenstein Municipality, because sections seldom communicate and interact, when they do it done informally on an adhoc basis. Communication only occurs when sections ask questions or require information but it is not done formally through a mandate or plan.

The nature of the municipality based on the documents, plan and policies, the organisational structure and design and the attitude of individuals, makes it challenging to implement integration practices. Each section needs to take ownership to encourage integration amongst their staff and between each other.

5.5 AIM AND OBJECTIVES

The aim of the study was to explore Integrated Environmental Management (IEM) on a local level in Drakenstein Municipality as it is practiced in the Environmental Management Section. The objectives were to identify and discuss the different IEM approaches, objectives and principles, to review IEM in Drakenstein Municipality by analysing documentation, goals, human resources and processes of the Environmental Management Section in terms of integration and to make recommendations if necessary.

5.5.1. Integration

The study shows that integration is practiced in the Environmental Management Section through their EMC and NRRG meetings held monthly and quarterly respectively as well as the SOP for delivery an integrated environmental comment. The IEM approaches, objectives and principles were researched and presented in chapter 2 along with the legislative background presented in chapter 3. Interviews were conducted with the Environmental Management Section and other sections identified by them whom they consider the need to integrate with based on their daily operations. This gave an overall review of integration in terms of the Environmental Management Section. To get a more holistic approach of integration efforts from a strategic viewpoint, the Councillor and the Manager of the IDP Section were interviewed as well. During these interviews the officials were asked questions regarding the documentation, human resources, goals and process in terms of integration with the Environmental Management Section and integration over all.

5.5.2. Documentation

Documentation is not integrated in the entire Infrastructure and Planning Directorate, neither is environmental documentation integrated into the sections under the directorate. Environmental documentation is only integrated within the Spatial Planning Section in which Environmental Management is placed. An example of this is the SDF and the EMF as discussed. The SDF and EMF also integrate and have been integrated into the IDP, which is the overarching strategic document of the municipality. Thus, integration with regards to documentation only happens on a vertical level in the municipality. It is not happening horizontally because the environmental documents are not integrated across the sections in the Infrastructure and Planning Directorate. In other words, the documents are not integrated between the Civil Engineering and Land Use Planning Sections. However, the SOP for

environmental comments requires all the sections to coordinate their comments into one coherent document. The SOP is thus an instrument that integrates horizontally.

5.5.3. Human resources

With regards to human resources, there is a lack in the willingness of officials to participate in current Environmental Management integration efforts based on the findings of the EMC and NRRG meetings. However, the officials interviewed mentioned that with regards to their own sections, they do have monthly staff meetings in which information is exchanged and officials are updated. It was also mentioned that Middle Line Managers play an important role with regards to implementing integration efforts. The officials interviewed felt that these managers need to build good relationships so that the sections could have better relationships. Good relationships have the potential to lead to integration; due to the nature of integration being people-orientated, especially in Drakenstein Municipality. The reason why the municipality's attempts at integration are people-orientated is because there is an absence of strategic integration efforts from top level management and also no planning methodology for integration.

5.5.4. Processes

With regards to processes, on a National and Provincial level, the municipality and the Environmental Management Section do attend integration forums and participate in integration efforts between the three spheres of government. The Municipal Managers attends the Provincial Coordinating Forum, the Environmental Management Section participates in the Air Quality Officers Forum, the Berg River Improvement Project, Berg River Partnership and the Berg River Quality Task Team, Municipal Outreach Project, the Climate Change Mitigation and Adaptation forum, SMART agri workshops and the Environmental Education forum. The main focus for integration is rather than external integration with other bodies in government, so that a coherent approach to the environment can be taken in relation to National and Provincial efforts, much rather than having a focus on internal integration. The reason for this being that these legislations and forums are considered strategic structures that attempt to initiate integration efforts. Strategic integration encourages continuous integration efforts much unlike the current operational integration efforts happening in the municipality, wherein sections only integrate as they step on each other's toes. A suggestion was made with regards to mitigating the operational integration happening, namely that sections should integrate on all projects in the municipality. This can be done via the EMT. The Executive

Managers should be made aware of projects within their directorates and then identify integration opportunities at the EMT meetings with the other Executive Managers so that a holistic integration effort can be achieved. The silos can thus be broken by integrating with sections outside of the directorate. For example, the Finance Section and Supply Chain Section from the Finance Services Directorate should be involved in integration efforts to share information and ideas on projects from a financial budget perspective. In this manner integration would also take a more proactive than a reactive approach. Proactive is better than reactive because environmental issues can be predicted and dealt with throughout the municipality before issues arise, and the proper section can be identified by the EMT with regards to dealing with any issues foreseen. The EMT has the authority and thus a major role to play in creating a strategic structure and planning methodology for integration within the municipality, so that it can become more proactive in its planning and integration can happen on a continuous basis.

5.5.5. Goals

With regards to the goals, each section has its own set of goals and targets to accomplish as set out in their SDBIPs. The sections do not integrate their goals with each other. Integration of goals from various sections that specialize in various professions is a challenge. However, with regards to integration, sections goals do not need to be integrated; instead integration should just be a common goal amongst them.

The small machine bureaucracies tend to operate separately creating silos between the sections making it difficult for them to integrate with one another. Knaggs (2015) acknowledged this and suggested that changing the organisational structure would assist in achieving better integration efforts. He suggested that the municipality should have a project based management structure instead. The idea is to eliminate the smaller machine bureaucracies of the divisional structure, yet maintain the formal structure of command for coordination purposes. A project based management structure that would best achieve Knaggs's description of the ideal organisational design for better integration would be the matrix structure.

5.5.6. Matrix structure

The matrix structure allows departments to focus on their specific technical competencies and allows projects undertaken by the department to be staffed with specialists from throughout the organisation. For instance, an official from the Civil Engineering Section may report to the Infrastructure and Planning Directorate, but would be allocated out to work on various projects within the Directorate regardless of the section. Therefore a Water Services technician might report to the Water Services manager but be temporarily assigned to a project in the Spatial Planning Section or even another Directorate that needs water services expertise. Another example would be when Financial Services and Supply Chain Management might report to the Finance Directorate but may be temporarily assigned to a project in the Infrastructure and Planning directorate that requires financial expertise. Figure 5.3 shows the matrix structure in which the program manager would refer to the EMT and the project manager refers to the middle line managers in the sections under each directorate.

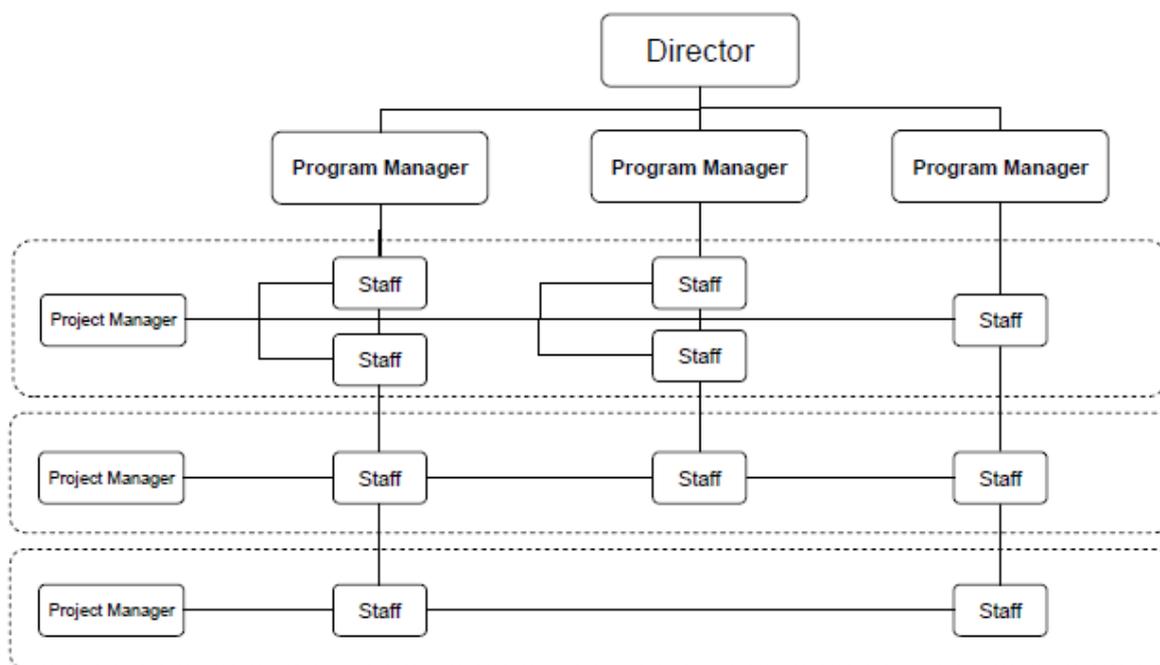


Figure 5.3: Matrix structure

Source: Project Management Organisational Structures, 2007

The matrix based organisation thus allows for the efficient allocation of resources, it is flexible to change, allows the sharing of information across boundaries and thus breaking silo's that sections tend to work in and hence allows for professional development (Project Management Organisational Structures, 2007). However, to be able to operate in the matrix

structure, officials would need strong time management skills because they might have to report to multiple managers, and hence this structure requires strong coordination and communication between managers and officials, as well as between the managers of different sections or directorates (Project Management Organisational Structures, 2007). To mitigate *this* Project Management Office (PMO) is recommended with the aim to coordinate and provide support to the project managers. “The PMO is the source of documentation, guidance and metrics on the practice of project management and implementation ... [it] can also help in the prioritization of human resources” (Project Management Organisational Structures, 2007). In this manner, the matrix structure with a PMO would allow for the integration of documents and human resources throughout the organisation and is ideal in achieving better integration practices.

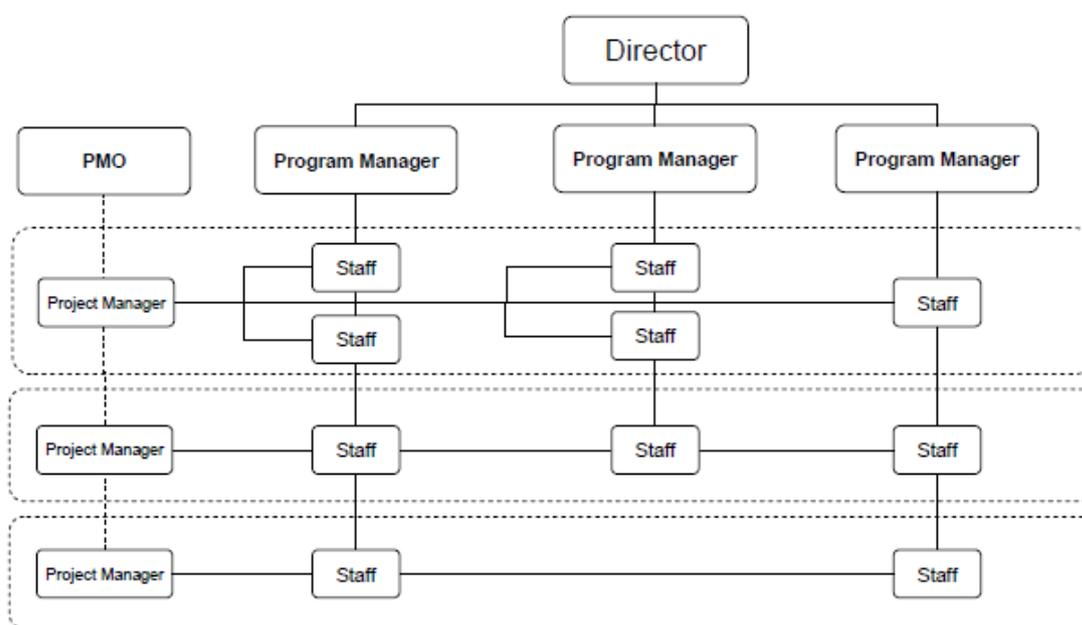


Figure 5.4: Matrix structure including the PMO

Source: Project Management Organisational Structures, 2007

A disadvantage would be integrating goals as each project might have its own set of goals that could coincide with the goals of the Programme Manager (EMT). But since in the context of the municipality, the EMT has the authority to assign projects to their sections, they should ensure that their goals and the projects goals are in line with each other. Hence, the EMT still plays a role in terms of integration matters in the municipality. The major difference between the current divisional structure of the municipality and the suggested matrix structure is that the smaller machine bureaucracies are terminated; the municipality

will run on a project basis and still have consistent members in each section to carry out daily tasks. Integration will increase because there is a better flow of information; silos are broken due to freedom of officials to move into differing sections, a PMO team whose main focus generally is integration with regards to documents and human resources. The matrix structure allows for a culture of integration to be established in an organisation and is thus a better option for the municipality than the current divisional structure.

5.6. CONCLUSION

The aim of this study was achieved in that the approaches, objectives, and principles of IEM were discussed and the documents, human resources and processes were analysed in terms of integration. So therefore IEM in the Environmental Management section of Drakenstein Municipality was explored and the following results were found.

In conclusion, Drakenstein Municipality has overall partial integration. The Environmental Management Section has integration efforts in place but requires the cooperation and coordination of all the sections with whom they integrate with for these efforts to be effective. Currently integration is happening operationally; the section still struggles to get sections to fully participate if not encouraged formally. In organisations that deal with a wide field of expertise and are required to provide a wide variety of services, full integration and the amalgamation of documents, human resources, goals and processes might not be the best type of integration. With regards to Drakenstein Municipality, partial integration is ideal because of the nature of a municipality, however strategic planning methodologies for internal integration between sections whose services affect each other is still necessary. Integration should be a key tool to deliver a holistic approach towards environmental management in the area and to Integrated Environmental Management principles and objectives. Drakenstein Municipality has the tools in place for IEM, it takes a reactive approach to integration efforts, this should change to a proactive approach. It has the National and Provincial legislation encouraging integration, but requires its own internal strategic methodologies that encourage integration. It has the resources such as documents, information resources and human resources available to integrate. Staff members need to be educated and encouraged to integrate. Integration has to run vertically and horizontally within the municipality, silos need to be broken and top management needs to step in. Integration does happen in Drakenstein Municipality, it just needs to be formalised so that it can happen in all and with all sections.

5.7 RECOMMENDATIONS

5.7.1. A culture of integration

It is recommended that Drakenstein Municipality creates a culture of integration between directorates, departments and sections; in doing so they should ensure that integration becomes a priority to all and should be included in the SDBIPs as a performance target with regards to section projects. Officials at all levels need to be educated about integration through workshops and be informed about the advantages it brings to the municipality and methods they could use to better implement integration throughout a project life cycle.

5.7.2. Strategic methodology for integration

Secondly, a strategic methodology for integration practices should be designed so that integration is encouraged through strategic practices, and hence becomes less people orientated as suggested by De Kock (2015). It is recommended that all projects are given to the EMT for discussion so that they may identify integration opportunities as suggested by Qebanya (2015). The suggestion made by Muller (2015) in which a shift of disciplines is required so that there no longer is an environmental section within the municipality, but environmental operations have been placed in the section which need them most is also recommended. This would break down the silo's and encourage environmental goals, documents, human resources and processes to be integrated into other sections. However, this requires more human resources than the Environmental Management Section currently has. The Environmental Management Section might be lost but environmental management is still incorporated into the Municipal functions.

5.7.3. Matrix structure

If the recommendations do not yield positive results then Drakenstein Municipality should consider restructuring to the Matrix organisational structure, this requires lots of resources and should only be considered if all options have been exhausted, if integration would drastically improve service delivery, if staff members are willing and if the municipality feels that integration is of the utmost importance to them.

5.8 FUTURE RESEARCH

- Develop a strategic methodology for internal integration in Drakenstein Municipality that can be carried out either by the Middle Line Managers or the EMT.
- Identify whether the Matrix structure is possible to implement in a Municipal setting and if staff members are willing of the change merely for integration purposes.
- Do the same study in another municipality to identify whether Municipalities experience the same integration challenges.

REFERENCES

Almeida, J., Domingues, P. and Sampaio, P. 2014. Different perspectives on management systems integration. *Total Quality Management*, 25(4):338-351.

Antonopoulos, I.S., Karagiannidis, A., Kontogianni, S., Malamakis, A., Tchobanoglous, G., and Zotos, G. 2009. Developing a holistic strategy for waste management within municipal planning: Challenges, policies, solutions and perspectives for Hellenic municipalities in the zero-waste, low-cost direction. *Waste Management*, 29(1):1686-1692.

Beckmerhagen, I.A., Berg, H.P., Karapetrovic, S.V. and Willborn, W.O. 2003. Integration of management systems: focus on safety in the nuclear industry. *International Journal of Quality & Reliability Management*, 20(2):210-228.

Bernardo, M., Casadesus, M., Karapetrovic, S. and Heras, I. 2009. How integrated are environmental, quality and other standardized management systems? An empirical study. *Journal of cleaner production*, 17(1):742-750.

Cowell, R. and Martin, S. 2003. The joy of joining up: modes of integrating the local government modernisation agenda. *Environment and Planning C: Government and Policy*, 21(1):159-179.

De Kock, C. 2015. Personal Interview. 28 September, Paarl.

De Villiers, B. and Sindane, J. 2011. Cooperative Government: The Oil of the Engine. Policy Paper No 6. Pretoria: Government Printer.

Department of Environmental Affairs and Development Planning. 2015. Drakenstein Environmental Management Framework.

Department of Environmental Affairs and Tourism. 2004(a). Integrated Environmental Management Information Series Overview of Integrated Environmental Management. Pretoria: Government Printer.

Department of Environmental Affairs and Tourism. 2004(b). Western Cape Provincial Environmental IDP Toolkit. Pretoria: Government Printer.

Department of National Treasury. 2011. Intergovernmental relations and the local government fiscal framework – local government budgets and expenditure review. Pretoria: Government Printer.

Department of Provincial and Local Government (DPLG). 2008. 15 year review report on the state of intergovernmental relations in South Africa. Pretoria: Government Printer.

Department of Public Service and Administration (DPSA). 2003. The Machinery of Government: Structures and functions of Government. Pretoria: Government Printer.

Drakenstein Municipality. 2012. Integrated Development Plan 2012-2017. [Online]. Available: <http://www.drakenstein.gov.za/Administration/Pages/DMSeedFund.aspx> [2015, 1 November].

Drakenstein Municipality. 2014. Annual Report 2014/2015. Paarl: Drakenstein Municipality.

Drakenstein Municipality. 2015. Drakenstein Spatial Development Framework Final Report. Paarl: Drakenstein Municipality.

Du Toit, L. 2015. Personal Interview. 1 October, Paarl.

Environment. 2015. [Online] Available: www.gov.za/about-sa/environment [2015, November 11].

Environmental Management: The ISO14000 family of International Standards. 2009. [Online]. Available: <http://www.iso.org> [2015, May 2].

Frans, S. 2015. Personal Interview. 28 September, Paarl.

Glazewski, J. 2000. Environmental law in South Africa. Durban: Butterworths.

Jabbour, C.J.C. and Santos, F.C.A. 2006. The Evolution of Environmental Management within Organisations: Toward a Common Taxonomy. *Environmental Quality Management*, 16(2):43-59.

Jorgensen, T.H., Remmen, A. and Mellado, M.D. 2006. Integrated management systems – three different levels of integration. *Journal of Cleaner Production*, 14:713-722.

Karapetrovic, S. 2003. Musings on integrated management systems. *Measuring Business Excellence*, 7(1):4-13.

Knaggs, J. 2003. Environmental Management Committee: Terms of Reference. Paarl: Drakenstein Municipality.

Knaggs, J. 2005. Drakenstein Natural Resource Management Reference Group Terms of Reference. Paarl: Drakenstein Municipality.

Knaggs, J. 2012. Integrated Environmental Management in the Drakenstein Municipality. 1-30.

Knaggs, J. 2015. Personal Interview. 7 October, Paarl.

Lane, M.B. and Robinson, C.J. 2012. Institutional complexity and environmental management: the challenge of integration and the promise of large-scale collaboration. *Australasian Journal of Environmental Management*, 16(1):16-24.

Layman, T. 2003. Intergovernmental Relations and Service Delivery in South Africa, A ten year review. South Africa: Government Printer

Malan, L. 2005. Intergovernmental relations and co-operative government in South Africa: The ten-year review. *Politeia*, 2(1):226-243.

Margerum, R.D. 1999. Integrated Environmental Management: The Foundations for Successful Practice. *Environmental Management*, 24(2):151-166.

Margerum, R.D. and Born, S.M. 2000. A Co-ordination Diagnostic for Improving Integrated Environmental Management. *Journal of Environmental Planning and Management*, 43(1):5-21.

Melnyk, S.A. and Sroufe, R.P. and Calantone, R. 2003. Assessing the impact of environmental management systems on corporate and environmental performance. *Journal of Operations Management*, 21(1):329-351.

Middleton, J., Goldblatt, M., Jakoet, J. and Palmer, I. 2011. Environmental Management and Local Government. 1-31.

Minimum Conflict: Guidelines for planning the use of American humid tropic environments. 1987. [Online] Available: www.oas.org/dsd/publications/Unit/oea37e/begin/html [2015, November 11].

Mokale, T. and Scheepers, T. 2011. A practical guide to achieving excellence in municipal governance in South Africa. Roodepoort: Proverto.

Morrow, D. and Rondinelli, D. 2002. Adopting Corporate Environmental Management Systems: Motivations and Results of ISO 14001 and EMAS Certification. *European Management Journal*, 20(2):159-171.

Mouton, J. 2001. *How to succeed in your Master's and Doctoral Studies: A South African Guide and Resource Book*. Pretoria: Van Schaik.

Muller, K. 2004. Sustainable Development: The question of integration and coordination. *Journal of Public Administration*, 39(3):398-410.

Muller, N. 2015. Personal Interview. 30 September, Paarl.

Nkonyane, S. 2015. Personal Interview. 25 September, Paarl.

Pojasek, R.B. 2006. Is your integrated management system really integrated? *Journal of Environmental Quality Management*, 16(2):89-97.

Project Management Organisational Structure, 2007. [Online]. Available: <http://www.pm4dev.com/resources/free-e-books.html> [2015, November 10].

Qebenya, F. 2015. Personal Interview. 1 October, Wellington.

Rabie, M.A. 2000. International encyclopedia of laws. London: Kluwer Law International.

Reece, S. 2015. Personal Interview. 21 September, Paarl.

Republic of South Africa. 1996. The Constitution. Pretoria: Government Printer.

Republic of South Africa. 1997. Organised Local Government Act (52 of 1997). Pretoria: Government Printer

Republic of South Africa. 1998. National Environmental Management Act (107 of 1998). Pretoria: Government Printer.

Republic of South Africa. 2000. Municipal Systems Act (32 of 2000). Pretoria: Government Printer.

Republic of South Africa. 2003. Municipal Finance Act (56 of 2003). Pretoria: Government Printer.

Republic of South Africa. 2004a. National Biodiversity Act (10 of 2004). Pretoria: Government Printer.

Republic of South Africa. 2004b. Integrated Environmental Management Series: Overview of Integrated Environmental Management. Pretoria: Government Printer.

Republic of South Africa. 2004c. National Environmental Air Quality Act (9 of 2004). Pretoria: Government Printer.

Republic of South Africa. 2005. Intergovernmental Relations Framework Act No. 13 of 2005. Pretoria: Government Printer.

Republic of South Africa. 2006. EIA Regulations, No. 385 of 2006. Pretoria: Government Printer.

Republic of South Africa. 2010. Draft Green Paper: Cooperative Governance Draft 4. Pretoria: Government Printer.

Republic of South Africa. 2015. Western Cape Environmental Implementation Plan 2015-2020. Pretoria: Government Printer.

Robbins, S.P. 1990. *Organization Theory: Structure Designs and Applications*. United States of America: Prentice-Hall, Inc.

Roelf, A. 2015. Personal Interview. 29 September, Paarl

Rondinelli, D.A. and Cheema, G.S. (eds). 2003. *Reinventing Government for the Twenty-First Century State Capacity in a Globalizing Society*. United States of America: Kumarian Press, Inc.

Rossouw, N. and Wiseman, K. 2004. Learning from the implementation of environmental public policy instruments after the first ten years of democracy in South Africa. *Impact Assessment and Project Appraisal*, 22(2):131-140.

Scrase, J.I. and Sheate, W.R. 2010. Integration and integrated approaches to assessment: what do they mean for the environment?. *Journal of Environmental Policy & Planning*, 4(1):275-294.

Sharples Environmental Services CC. 2015. Standard Operating Procedure Delivery of Integrated Multidisciplinary Comment on Environmental Applications. Paarl: Drakenstein Municipality.

Strydom, H.A. and King, N.D. (eds). 2009. Fuggle and Rabie's Environmental Management in South Africa. Cape Town: Juta Law.

Subsidiarity and its protection of Agency Part 1. 2014. [Online]. Available: (<https://transformplace.wordpress.com/subsidiarity-and-its-protection-of-agency/>) [2015, May 25].

Summers, R. 2013. *Environmental Law Guest Lecturer Notes*. Stellenbosch University. [March].

United Nations. 1992. Conference on Environment and Development. Agenda 21. 3 to 14 June, Brazil.

Van der Linde, M. (ed). 2007. Compendium of South African environmental law. Pretoria: Pretoria University Law Press.

Western Cape Government-Environmental Affairs and Development Planning. 2015. Environmental Management Framework for the Drakenstein Municipal Area. Cape Town: Government Printer.

Winter, C. 2015. Personal Interview. 21 September, Paarl.

Worely Parsons. 2014. Strategic Environmental Assessment for the Extension of Wellington's Industrial Precinct. Paarl: Drakenstein Municipality.

Zoratti, S. 2015. The pros and cons of 7 popular marketing organizational structures (with diagrams). [Online]. Available: <http://thecmoclub.com/resource/pros-cons-7-popular-marketing-organizational-structures-diagrams/>

Annexure 1: Structured interview questions

Documentation

1. What are the key documents used on a regular basis (including documents from other sections)
2. How do you become aware of this documentation?
3. Are these documents set up in collaboration with other sections?
4. How (find out if they have the same understanding of what collaboration means?)
 - a. How do you collaborate with other sections when setting up your own documentation?

Goals

5. What are the main goals of your section?
6. How does the section identify or set its goals and priorities? Is it linked with the goals and priorities of other sections?
7. Does the section have any meetings that take place on a regular basis wherein other sections are involved?
 - a. Which other sections are involved in these meetings
8. What do you understand under the concept of integration?

Human resources

9. Which members of staff attend meetings held by other sections?
10. Are the staff members aware of the monthly and quarterly EMC and NRRG meetings?
11. Do you attend these meetings on a regular basis?
12. Based on the current setting of the municipality, are you easily able to contact staff from other sections?
13. Do employees have a clear understanding of who is involved in coordination or integration efforts?
14. In your opinion, who are the most important role players for integration?
15. In your own opinion, are there any limits (with regards to your section) to successful integration?

Processes:

16. When does the section integrate with other sections?
17. Do you find that integration (with other sections) are necessary in your daily operations?
18. Which other sections within the municipality does your sections mostly integrate with?
19. Do these actions take place through a formal mandate?
20. What encourages integration within your section?

Monthly EMC and NRRG meetings:

21. What do you understand to be the aim of these meetings
22. DO you feel it is a successful attempt to integrate sections?
23. Are you encouraged to participate in these meetings?

24. Observations will be added

25. Are there any other staff members whom you would suggest to be interviewed for the purpose of this thesis?

Annexure 2: Schedule 4 of the Constitution

Administration of indigenous forests
Agriculture
Airports other than international and national airports
Animal control and diseases
Casinos, racing, gambling and wagering, excluding lotteries and sports pools
Consumer protection
Cultural matters
Disaster management
Education at all levels, excluding tertiary education
Environment
Health services
Housing
Indigenous law and customary law, subject to chapter 12 of the Constitution
Industrial promotion
Language policy and the regulation of official languages to the extent that the provisions of section 6 of the Constitution expressly confer upon the provincial legislature's legislative competence
Media services directly controlled or provided by the provincial government, subject to section 192
Nature conservation, excluding national parks, national botanical gardens and marine resources
Legislative competence
Pollution control
Population development
Property transfer fees
Provincial public enterprises in respect of the functional areas in this Schedule and Schedule 5
Public transport
Public works only in respect of the needs of provincial government departments in the discharge of their responsibilities to administer functions specifically assigned to them in terms of the Constitution or any other law
Regional planning and development
Road traffic regulation
Soil conservation
Tourism
Trade
Vehicle licensing
Welfare services

PART B

The following local government matters *to* the extent set out in section **15.5 (6) (a)** and (7):

Air pollution
Building regulations
Child care facilities
Electricity and gas reticulation
Fire fighting services

Local tourism

Municipal airports

Municipal planning

Municipal health services

Municipal public transport

Municipal public works only in respect of the needs of municipalities in the discharge *of* their responsibilities to

Administer functions specifically assigned to them under this Constitution or any other law

Pontoons, ferries, jetties, piers and harbours, excluding the regulation of international and national shipping and Storm water management systems in built-up areas

Trading regulations

Water and sanitation services limited to potable water supply systems and domestic wastewater and sewage disposal matters related thereto.

Annexure 3: Schedule 5 of the Constitution

Abattoirs
Ambulance services
Archives other than national archives
Libraries other than national libraries
Liquor licences
Museums other than national museums
Provincial planning
Provincial cultural matters
Provincial recreation and amenities
Provincial sport
Provincial roads and traffic
Veterinary services, excluding regulation of the profession

PART B

The following local government matters to the extent set out for provinces in section 155 **(6)** and **(7)**:

Beaches and amusement facilities
Billboards and the display of advertisements in public places
Cemeteries, funeral parlours and crematoria
Cleansing
Control of public nuisances
Control of undertakings that sell liquor to the public
Facilities for the accommodation -are and burial of animals
Fencing and fences
Licensing of dogs
Licensing and control of undertakings that sell food to the public
Local amenities
Local sport facilities
Markets
Municipal abattoirs
Municipal parks and recreation
Municipal roads
Noise pollution
Pounds
Public places
Refuse removal, refuse dumps and solid waste disposal
Street trading
Street lighting
Traffic and parking

Annexure 4: Principles of cooperative governance

41. Principles of co-operative government and intergovernmental relations.—

- (1) All spheres of government and all organs of state within each sphere must—
- (a) preserve the peace, national unity and the indivisibility of the Republic;
 - (b) secure the well-being of the people of the Republic;
 - (c) provide effective, transparent, accountable and coherent government for the Republic as a whole;
 - (d) be loyal to the Constitution, the Republic and its people;
 - (e) respect the constitutional status, institutions, powers and functions of government in the other spheres;
 - (f) not assume any power or function except those conferred on them in terms of the Constitution;
 - (g) exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere; and
 - (h) co-operate with one another in mutual trust and good faith by—
 - (i) fostering friendly relations;
 - (ii) assisting and supporting one another;
 - (iii) informing one another of, and consulting one another on, matters of common interest;
 - (iv) co-ordinating their actions and legislation with one another;
 - (v) adhering to agreed procedures; and
 - (vi) avoiding legal proceedings against one another.
- (2) An Act of Parliament must—
- (a) establish or provide for structures and institutions to promote and facilitate intergovernmental relations; and
 - (b) provide for appropriate mechanisms and procedures to facilitate settlement of intergovernmental disputes.
- (3) An organ of state involved in an intergovernmental dispute must make every reasonable effort to settle the dispute by means of mechanisms and procedures provided for that purpose, and must exhaust all other remedies before it approaches a court to resolve the dispute.
- (4) If a court is not satisfied that the requirements of subsection (3) have been met, it may refer a dispute back to the organs of state involved.

Annexure 5: Schedule 1 of NEMA

SCHEDULE 1

Section 11(1)

National departments exercising functions which may affect the environment

- * Department of Environmental Affairs and Tourism
- * Department of Land Affairs
- * Department of Agriculture
- * Department of Housing
- * Department of Trade and Industry
- * Department of Water Affairs and Forestry
- * Department of Transport
- * Department of Defence

Annexure 6: Schedule 2 of NEMA

SCHEDULE 2

Section 11(2)

National departments exercising functions that involve the management of the environment

- * Department of Environmental Affairs and Tourism
- * Department of Water Affairs and Forestry
- * Department of Minerals and Energy
- * Department of Land Affairs
- * Department of Health
- * Department of Labour

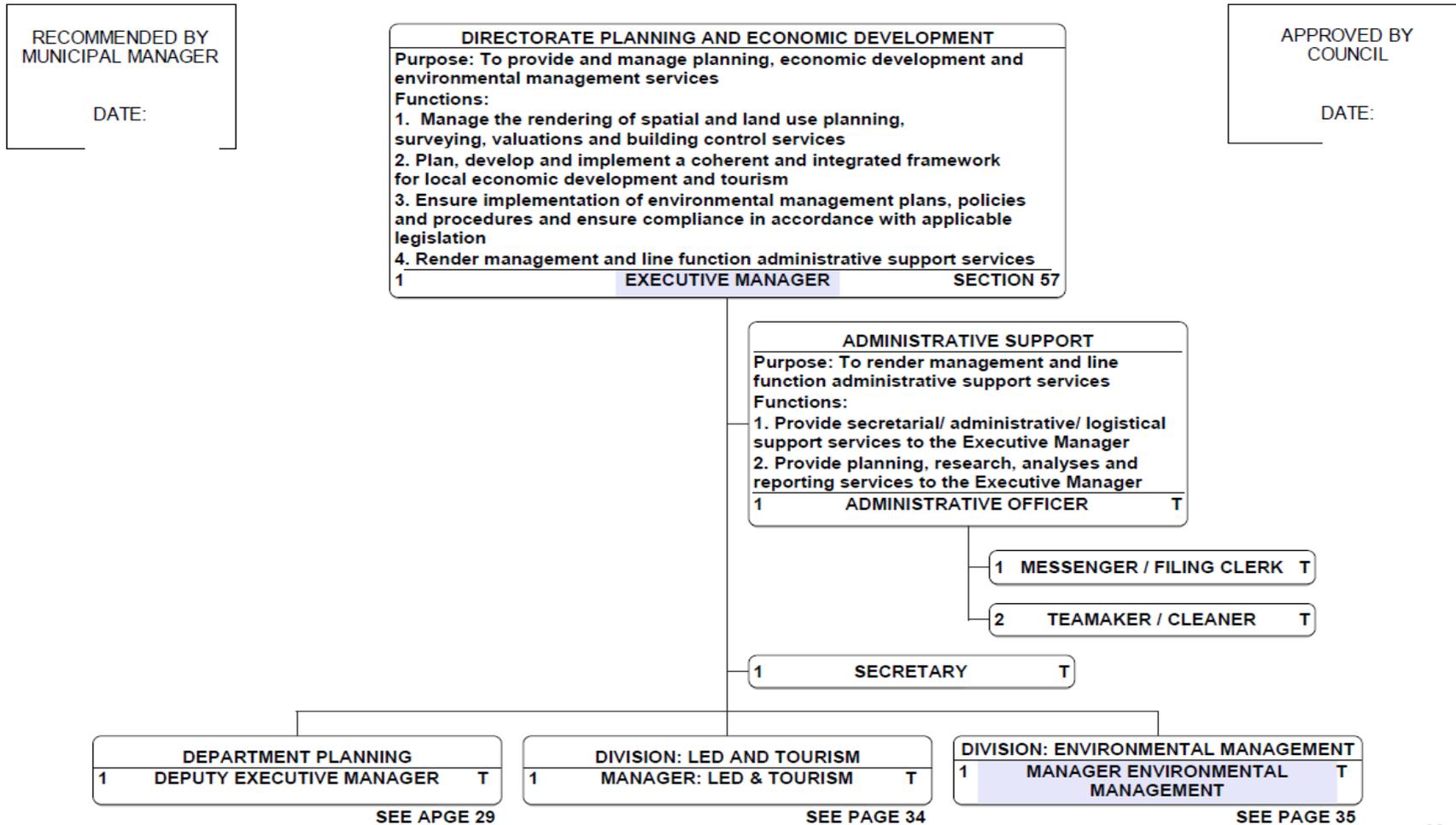
Annexure 7: Standard operating procedure

The SOP for commenting on environmental applications “outlines the process by which the Drakenstein Municipality will provide integrated multi-disciplinary comment on environmental applications” (Sharples Environmental Services CC, 2015:4). It aims to “coordinate the actions and interactions of the various role players within the municipality, and assigns responsibilities and timeframes” (Sharples Environmental Services CC, 2015:4). It also aims to “ensure that the final comment that is produced by the municipality is aligned with the strategic policies and documents of the municipality and that ... any conflicts in comments between different municipal stakeholders are resolved internally” (Sharples Environmental Services CC, 2015:4). The sections that are involved in this SOP and required to comment on the environmental applications are the Environmental Management, Civil Engineering Services, Spatial Planning and Land Use Planning Sections. Once an application comes in for comment the assigned Environmental Officer will identify the appropriate commentators for the application and notify them of this. The commentators are identified by the Environmental Officer using the Screening Checklist in the SOP. A Review/Commenting Checklist is also provided to the commentators to facilitate and guide the commentators as to the nature of the comment required from them. In this manner, an integrated environmental comment can be generated in which all aspects are addressed by the expertise in various departments. It also ensures that the correct information is sent out in one generic document. In a case like this, the sections might be more willing to integrate because the integration process is clearly explained to them, they know what to do, when to do it and to whom to send it once completed.

Annexure 8: Organogram of the Planning and Economic department

03 DES 2012

PROPOSED ORGANISATIONAL STRUCTURE DRAKENSTEIN MUNICIPALITY



Annexure 9: Organogram of the Environmental Management

03 DES 2012

PROPOSED ORGANISATIONAL STRUCTURE DRAKENSTEIN MUNICIPALITY

RECOMMENDED BY
MUNICIPAL MANAGER

DATE:

APPROVED BY
COUNCIL

DATE:

