

**The effectiveness of co-operative governance
agreements when dealing with multiple environmental
authorisations in South Africa**

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PREFACE

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ABSTRACT

One of the solutions to many environmental challenges associated with loss of biodiversity, water, and air pollution lies in compliance with legislative requirements (Parker, 2000). One such legislative requirement is effective co-operative environmental governance agreements (Parker, 2000). The effectiveness of co-operative environmental governance agreements has been questioned by several authors since their establishment (Lehman, 2009; Blackman et al., 2009; Khan, 2016; Du Plessis, 2008). This questioning has created two schools of thought on the effectiveness of these agreements. Literature provides an argument whereby some authors believe that there are legislative provisions and mechanisms in place and that adoption and implementation of the agreements by stakeholders can lead to positive integrated environmental governance practices (Du Plessis, 2008). However, an opposing view is from critics of the agreements who argue that an integrated systems approach is required to improve the performance of the current environmental co-operative government agreements. The argument of the critics presents that they are not convinced that without addressing the fragmented environmental management systems, capacity constraints in South African environmental fraternity, it may result in significant environmental benefits (Kotzé, 2012).

In light of these differing views concerning the effectiveness of the current environmental co-operative governance, the objective of this study was to evaluate the effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations in South Africa. The effectiveness of co-operative governance agreements was assessed in the context of Memorandum of Agreements (MoAs) regarding Disposal Site Authorisation using Eskom's Ash Disposal Facilities (ADF). This was executed by analysing the legal provisions created, motivations provided to support, mechanisms to influence, and challenges associated with the implementation of the MoA. The study also evaluated the environmental governance structures and the extent to which the MoA's objectives are met.

Based on qualitative interviews with a sample including Government Officials¹, Eskom Environmental Advisors and Environmental Consultants who worked on Eskom's ADFs' environmental authorisation processes, and analysis of relevant archival documents, the study suggested limited effectiveness of the agreement in achieving the expected goal in terms of the MoA objectives. The results did indicate that there are legislative provisions for co-operative governance agreements in South Africa. The main reasons for the limited achievement and the main challenges on the effectiveness of the agreements associated with lack/inadequacy of resources in numbers, the capacity of officials on technical skills, and lacking commitments and responsibility from Senior government officials to implement the MoA. Additional challenges were related to the symbolic implementation and enforced implementation by government departments (i.e., its lack of substantive implementation).

¹ Government Officials: Refers to officials of the Department of environmental affairs (DEA) and the Department of water and sanitation (DWS)

Even though this research study was restricted to Eskom's Ash Disposal Facilities, which suggests that there is limited effectiveness of a MoA as a co-operative governance agreement tool in achieving expected MoA objectives, it should not be inferred that this inadequacy of co-operative governance implementation is as inadequate to other waste applications and applicants, as it is observed in the case of Eskom. This study recommends an extension of the investigation of the effectiveness of this governance tool to other waste applications as a follow-up study. Following this study, it is anticipated that a collective presentation can conclude, and a proper decision might be made to influence this tool.

KEY WORDS: Effectiveness; Co-operative governance agreements; Memorandum of agreements; Multiple environmental authorisations; Ash Disposal Facilities

ACRONYMS AND ABBREVIATIONS

ADF	ASH DISPOSAL FACILITY
CEG	COOPERATIVE ENVIRONMENTAL GOVERNANCE
DEA	DEPARTMENT OF ENVIRONMENTAL AFFAIRS
DEAT	DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM
DEFF	DEPARTMENT OF ENVIRONMENT, FORESTRY AND FISHERIES
DWS	DEPARTMENT OF WATER AND SANITATION
DWAF	DEPARTMENT OF WATER AFFAIRS AND FORESTRY
EA	ENVIRONMENTAL AUTHORISATION
EEA	EUROPEAN ENVIRONMENTAL AGENCY
EMF	ENVIRONMENTAL MANAGEMENT FRAMEWORK
EPCA	ENVIRONMENTAL POLLUTION CONTROL AGREEMENTS
GHG	GREEN HOUSE GAS
GNA	GOOD NEIGHBOUR AGREEMENTS
IBF	INTERNATIONAL BAR ASSOCIATION
IGF	INTER-GOVERNMENTAL FORUM
IPPC	INTEGRATED POLLUTION PREVENTION AND CONTROL
NEMA	NATIONAL ENVIRONMENTAL MANAGEMENT ACT, NO. 107 OF 1998
NEMWA	NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, NO. 59 OF 2008
NNRA	NATIONAL NUCLEAR REGULATOR AUTHORITY
NNRAA	NATIONAL NUCLEAR REGULATOR AUTHORITY AGREEMENTS

NRA	NUCLEAR REGULATOR ACT
MINMECS	MINISTERS AND MEMBERS OF EXECUTIVE COUNCIL MEETINGS
MoA	MEMORANDUM OF AGREEMENT
MoU	MEMORANDUM OF UNDERSTANDING
RoD	RECORD OF DECISION
WML	WASTE MANAGEMENT LICENCE
WUL	WATER USE LICENCE

DEFINITIONS AND TERMINOLOGIES

Agreement

“It means this agreement: Memorandum of Agreement (MoA) Regarding Disposal Site Authorisation in terms of Section 20 of Environmental Conservation Act, 1998 (Act 73 of 1989)) or any supplementary protocols and manuals approved by both Department of Environmental Affairs (DEA) and Department of Water and Sanitation” (DWS).

Ash disposal facility

“It is a disposal facility for ash at Eskom, where ash is safely disposed of, which is produced from the coal combustion process at the Eskom coal-fired power plant. Eskom Holdings SOC Limited: Environmental Guideline” (Eskom, 2007).

Disposal

“Means the burial, deposit, discharge, abandoning, dumping, placing or release of any waste into, or onto, any land. National Environmental Management Waste Act (Act No 59 of 2008)” (South Africa, 2008a).

Environment

“Means 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 interrelationships 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. National Environmental Management Act (Act No 107 of 1998)” (South Africa, 1998a).

Environmental authorisation

“Is a document or certificate that may be issued by a competent authority (government department, minister, authorised official) to an applicant to grant the applicant permission to perform certain acts or activities that may have an impact on the environment” (Kotzé, 2005).

Eskom

“Eskom Holding SOC Ltd is a South African electricity public utility.”

Government authorities

“Refers to the Department of Environmental, Forestry and Fisheries (DEFF) and Department of Water and Sanitation “(DWS).

Memorandum of agreement

“Memorandum of Agreement between Department of Water and Sanitation and Department of environmental affairs, Regarding Disposal Site Authorisation in terms of Section 20 of Environmental Conservation Act, 1998 (Act 73 of 1989)” (South Africa, 2008b).

Waste disposal facility

“Any site or premise used for the accumulation of waste with the purpose of disposing of that waste at that site or on that premise. National Environmental Management Waste Act (Act No 59 of 2008)” (South Africa, 2008a).

Water resource

“Water resource includes a watercourse, surface water, estuary, or aquifer. National Water Act (Act No 36 of 1998)” (South Africa, 1998b).

Water use licence

“This means a licence issued under section 40 of the National Water Act (Act No 36 of 1998), and require the approval of an application by the Department of Water and Sanitation. National Water Act (Act No 36 of 1998)” (South Africa, 1998b).

Waste management licence

“This means a licence issued in terms of section 49 of the National Environmental Management Waste Act, 2008. National Environmental Management Waste Act (59 of 2008)” (South Africa, 2008a).

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CHAPTER 1: INTRODUCTION

1.1 Background

Environmental policy *“in the 1970s and early 1980s was mainly driven by regulations of emissions, environmental quality, processes, and technologies”* (Zickiene, 2017). According to Kotzé (2007), *“such regulations are described as instruments of command and control”*. However, during the later *“1980s and the 1990s”*, the interest of authorities focused on co-operative environmental agreements² as new regulatory tools, which aims to improve environmental performance (Zickiene, 2017). According to Seekoe (2017), these agreements are an administrative contract entered into by two or more stakeholders in addressing challenges in the implementation of environmental governance. The most fundamental reasons to engage in these agreements were stimulated by several factors: (i) the need to integrate environmental legislation to minimise duplication of work on environmental authorisations (Nel et al., 2005); (ii) and to improve communications with all stakeholders and self-regulatory systems on environmental issues (Gebers, 1998).

Current international environmental policies promote collaborative and participatory decision-making on environmental authorizations and deferent spheres of government as a means to attain more effective policy implementation and enforcement (Golberg, 2018). The new regulatory tool that was adopted by the European Union countries encountered several challenges in relation to effectively improve environmental management (Golberg, 2018). The majority of studies conducted globally assessed the effectiveness of environmental assessments, policy implementation, and environmental management cooperative agreements with respect to improving environmental performance and whether it conforms to its established provisions, principles, and objectives (Massoud et al., 2010). According to Sadler (1996), a co-operative governance agreement is effective when its intended objectives are attained.

Several authors motivated that the adoptions of these agreements will resolve the current challenges: (i) lack of co-operative governance, overcome environmental fragmentation and capacity constraints during the authorization processes (Kotzé, 2012); and (ii) allow stakeholders to successfully manage the environmental problems in industrialised democratic states. According to Lehman (2009), Blackman et al. (2009), Khan (2016) and Du Plessis (2008), environmental agreements do not necessarily lead to significant benefits on co-operative governance. Non-achievement of the expected benefits could be due to a number of challenges. Some of the challenges may be related to the performance of the implementation of the agreement (Khan, 2016); lack of uncertainty on voluntarily negotiated agreements (Lehman, 2009); and the intent of cooperative environmental governance (Du Plessis, 2008).

² Co-operative Environmental Agreements: Means an agreement referred to in section 35 (1) of NEMA.

In South Africa, like elsewhere, environmental institutional fragmentation and lack of coordination among the various environmental authorities create a barrier to successfully integrated environmental governance (Kotzé, 2012). Following the successful democratisation of South Africa in 1994, the transformation of the new government created a willingness to consider and experiment with alternative service-delivery mechanisms (Kotzé, 2012). It was clear that there was an opportunity to align the approaches and capabilities of different departments towards implementing strategies within the framework of cooperative governance created by the Constitution of South Africa (Muller, 2009).

The general conclusion from these initiatives is that the government department that internalises cooperative governance agreements into their practices are most likely to attribute or alleviate administrative burdens to environmental authorisations (Du Plessis, 2008). Lack of uncertainty, skills, and bureaucracy on the government department have been cited as impediments to the effectiveness of these agreements (Kotzé, 2007).

However, questions remain about the effectiveness of co-operative governance agreements when dealing with integrated environmental authorisations. Although the legislation does not distinguish between intra and inter-departmental integrated authorisation, for this study, multiple environmental authorisation³ will be adopted to inter-departmental integrated authorisations. Du Plessis (2008) assert that this agreement is not of much use if it cannot assist government departments and organisation in reducing administrative burdens associated with environmental authorisations. It is against this background that the researcher intends to evaluate the effectiveness of Memorandum of Agreements (MoA), as a co-operative environmental governance agreement tool, in authorising waste facilities in the case of Eskom's ashing facilities.

1.2 Problem statement

Global environmental challenges are not the responsibility of a specific environmental organisation, entity, or individual. The challenge requires a collaborative effort among numerous stakeholders to achieve collective environmental goals (Muller, 2009). Managing the magnitude of environmental challenges is a complex situation due to the fragmented environmental management field (Kotzé, 2012). Environmental disciplines include air quality, noise control, waste management, biodiversity management, water management, and pollution control (Muller, 2009). The environment is understood to be broader than only the natural resources but also includes cultural heritage as well as the urban environment and its social constructs (Glazewski, 2005).

In South Africa, as with other countries, environmental, institutional fragmentation, and lack of coordination among the various environmental authorities create a barrier to successfully integrated environmental governance (Kotzé, 2012). It is due to the above problems that cooperative governance

³ Multiple Environmental Authorisations: Refers to Environmental Authorisations, from various departments, including those responsible for environmental affairs, water and sanitation.

has emerged as a global challenge that affects environmental authorisations (Muller, 2008). The South African environmental fraternity developed one of the most effective environmental legislation (Snyman, 2003). In spite of the excellent new environmental legislation, problems still exist with regard to the administration of environmental matters (Snyman, 2003). Snyman (2003) continues to emphasise that the main challenge in the South African context is government departments are not cooperative to the enforcement of environmental policies and legislation and the new mechanisms developed to ensure co-operative environmental governance. Government department's drafts and sign memorandums of agreements (MoA), which aims to address all the foregoing problems that are associated with fragmented environmental authorisations (Kotzé, 2007). Du Plessis (2008) raised a concern that MoA is not effective because it is concluded at a high political level without buy-in from officials on the ground.

Kotzé (2007), states that these agreements are increasingly signed globally, but their intended objectives not met. This is supported by Snyman (2003), in that these agreements are challenged continuously, which suggests that their decisions do not always amount to good environmental governance.

In compliance to the requirements of cooperative governance, protecting the environment, streamlining administrative process and eliminate any duplication of work in authorising disposal facilities, the Department of Environmental Affairs (DEA⁴) and the Department of Water and Sanitation (DWS) took the initiative to sign a MoA in authorising waste facilities (Du Plessis, 2008). The agreement seeks to provide co-operative environmental authorisation to fast-track the issuance of a waste licence in terms of section 20(b) of the National Environmental Management Waste Act (Act 59 of 2008) (NEMWA) (South Africa, 2008b).

Nevertheless, in compliance with the requirements of the environmental legislation, and to manage environmental impact associated with human activities, environmental authorisations (EA) are used as tools to control and manage those activities (Kotzé, 2012). The extent to which human activities affect the environment also depends upon the effectiveness of the implementation of the EA (Kotzé, 2007). However, EA is a product of the decision-making process, which entails a need to maintain a balance in environmental protection and development (Steenkamp, 2009). Such a decision-making process involves exchanges of information between the developers and the state. With regard to ash disposal facilities, the process within the state involves the two government departments, namely, DEA and DWS (Eskom, 2014).

To help address these environmental administrative challenges and to avoid duplication and conflicting decision-making, DEA and DWS developed MoAs (Du Plessis, 2008). According to Du Plessis (2008), these MoA are used as a tool for cooperative environmental governance. However, parties still experience challenges brought about by parallel authorisation issued with the same objectives for the

⁴ DEA: Department of Environmental Affairs, now called the Department of Environment, Forestry and Fisheries (DEFF).

same activity. This then necessitates a closer examination of an MoA in order to critique how effective is the agreement in the issuance of multiple environmental authorisations in the case of Eskom ash disposal facilities i.e. to minimise environmental administrative burdens and frustrations experienced by stakeholders in the cooperative agreements when dealing with multiple environmental authorisation in South Africa (Kotzé, 2012).

1.3 Rationale of the research

The current initiatives on MoA between DEA and DWS on waste disposal sites will help the South African government in meeting its objectives for cooperative environmental governance. Given the potential benefits of the MoA regarding Disposal Site Authorisation in terms of Section 20 of Environmental Conservation Act, 1998 (Act 73 of 1989), it is important to understand its effects on ash disposal facilities in improving working relations, avoiding work duplications and improve environmental sustainability. Ultimately, the author hopes that the results of this study will help the authorities in amending their agreements and working relations.

1.4 Research aim and objectives

This research is intended to evaluate the effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations in South Africa. The main objectives of the study are as follows:

1. Study the effectiveness of co-operative governance and the measures provided for in South African legislation.
2. Develop the framework to evaluate the effectiveness of the MoA practices regarding Disposal Site Authorisation in South Africa
3. Evaluate the performance of the MoA on Eskom's Ash Disposal facilities.

1.5 Structure of the research study

This study will consist of six chapters, which are outlined as follows:

Chapter 1: Introduction

This chapter serves as an introduction to the research study. It provides a general overview, including a background to the study, the problem statement, the objective of the research study, and details the rationale.

Chapter 2: Research Methodology

This chapter describes the research methodology that was applied to address the research aim and objectives introduced in Chapter 1. The chapter continues to outline types of methodology used, the study population, and the unit of analysis, sampling methods used and sample size, data collection

procedures as well as the process of data analysis. The chapter concludes with a discussion on the ethical considerations, limitations that had an impact on this study, and the summary of methodology and methods used.

Chapter 3: Cooperative environmental governance in South Africa and legal provisions

This chapter identifies legal provisions for cooperative environmental governance (CEG) in South Africa and its alignment of environmental authorisations. The research only focuses on three specific pieces of legislation, namely: the National Environmental Management Act (NEMA), National Water Act (NWA), and National Environmental Management: Waste Act (NEMWA).

Chapter 4: Effectiveness of co-operative environmental governance tools

This chapter provides the reader with the necessary understanding of terminologies used in the study and an in-depth literature review that focuses on identifying the concepts used to assess the effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations. This chapter will also review the challenges of environmental agreements on cooperative governance, mechanism, and tools used to assess the effectiveness of environmental agreements. Lastly, it will introduce the framework to be used to evaluate the effectiveness of cooperative governance agreements.

Chapter 5: Research findings

This chapter will present, interpret, and analyse the findings from interviews to determine how the processes are implemented. This chapter presents the research results following the developed framework. The chapter also outlines views of Government (authorities), Environmental consultants, and Eskom officials on how the process can be made effective to meet the objective of cooperative governance.

Chapter 6: Discussion and conclusion

This chapter discusses research findings based on the literature review, primary and secondary data, after which the overall conclusions and recommendations are made in terms of the research findings. The chapter also contains reflections on the implications for further research studies.

CHAPTER 2: RESEARCH METHODOLOGY

2.1 Introduction

The objective of this study is to evaluate the effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations in South Africa. The purpose of this chapter is to present details of the research design and methodology used to meet the research objectives posed in this study, and defends the methodological choices made. Research design is a general strategy for solving a research problem. Kothari (2004) defines research design as *“the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement, and analysis of data.”* The research methodology is the techniques used to collect and analyse data (Leedy & Ormrod, 2010). The chapter concludes with a discussion on the limitations that had an impact on this study and the summary of methodology and methods used.

2.2 Research strategies

Research strategies include a qualitative approach encompassing archival analysis and case study. Qualitative research is more *“exploring and understanding the meaning of individuals or groups ascribe to a social or people’s problems”* (Creswell, 2008). The process of these research projects involves interpretation, description, verification, and evaluation (Kothari, 2004). According to Creswell (2008), here researcher relies on the views of participants; and analyses these views; and conducts an inquiry in a subjective, biased manner. The processes, when used for evaluation, can help the researcher to evaluate the effectiveness of practices (Leedy & Ormrod, 2014). Creswell, (2008: 321-329) identify ways to conduct qualitative studies:

- **“Ethnography** is a strategy where the researcher studies group by collecting, and interview data” (Creswell, 2008).
- **“Case studies** are strategies were the researcher explores in depth a programme, event, activity, process, or individuals involved. Researchers collect detailed information using a variety of data-collection procedures” (Creswell, 2008).
- **“Phenomenological research** is a strategy of inquiry in which the researchers seek to understand an experience from a participant’s point of view. In this process, the researcher sets aside his or her own experiences to understand those of the participants in the study” (Creswell, 2008).

It should, however, be noted that the above qualitative designs share the following characteristics: research occurs in a natural setting; data is derived from the participant’s perspective; research design is flexible and; observation methods and measurement instruments modes of analysis are not standard (Lee, 2012).

The choice of the research approach largely depended on what is feasible and best in addressing the research objectives. According to Yin (2014), such choices are based on the research objectives to be addressed or the aim of the study. The applicable situations for various research approaches are depicted in 2.1. (Yin, 2014).

Table 2.1: Relevant situations for different research strategies

Research approach	Form of a research question	Requires control over behavioural events?	Focuses on contemporary events
Archival analysis	Who, what, where, how many, how much	No	Yes/No
Case study	How, why	No	Yes

2.3 Research design

The research design adopted in this study is based on the type or nature of the research questions to be addressed and the overall purpose the study aims to achieve, as outlined by Yin (2014) (refer to Table 2.1). The research questions poised are related to the “what” question, and such questions should be addressed using a survey or archival analysis. However, in the exploratory study, any of the approaches could be used (Yin, 2014). Research approaches used to address the sub-questions are outlined in Table 2.1.2.

Table 2.1: Research approaches used to address the research questions

Research question	Form of a research question	Purpose of research	Research approach	Data collection methods
Study the effectiveness of co-operative governance and the measures provided for in South African legislation.	What	Exploratory	Case study	Literature review
Develop the framework to evaluate the effectiveness of the MoA regarding Disposal Site Authorisation in South Africa.	What	Exploratory	Case study	Literature review
To what extent were the objectives of the cooperative agreements been met, particularly with regards to	How	Exploratory	Case study	Interview and archival analysis

Research question	Form of a research question	Purpose of research	Research approach	Data collection methods
the MoA when authorizing Eskom's ash disposal facilities?				

The research design chosen for this study was thus qualitative and exploratory because this method allows for a deeper understanding of the phenomena (Yin, 2014). A case study approach is used in this study as a strategy to explore in-depth a process of authorisation and will also answer the “what” and “how” questions (Creswell, 2008). The selected case study that will allow the researcher the in-depth understanding of applicability to the MoA in the authorisations of newly constructed Eskom's ash disposal facilities (ADF).

The case study was selected because the contexts and conditions of different Eskom power stations multiple environmental authorizations (EA) issued on ADFs are vital to understanding the effectiveness of cooperative environmental agreements, an embedded case study methodology was deemed appropriate to meet the objectives of the research study. An embedded case study is a type of case study comprising a number of sub-units of analysis (Yin, 2014).

In summary, the study includes exploratory, qualitative methods and will explore how effective South African co-operative governance agreements are in dealing with multiple environmental authorizations (in the case of Eskom ADF).

2.4 Study area: A case study

An Eskom coal-fired power plant was used as a case study because it applied for waste licences and water use licences (WUL) for their ashing facilities (Eskom, 2017). This case was selected because the authorisations of Eskom's ash disposal facilities were subjected to the MoA process. According to Du Plessis (2008), this MoA was designed to manage and authorise general and hazardous waste facilities in-terms of Section 20 of the Environment Conservation Act, 1989 (Act 73 of 1989). In the process of transforming environmental legislation, the National Environmental Management Waste Act (Act 59 of 2008) (NEMWA) was promulgated and changed the legal landscape for waste management in South Africa. Furthermore, ash disposal facilities were then listed as waste management activities that have or likely to have a detrimental effect on the environment. In compliance with the requirements of the NEMWA and National water act (Act 36 of 1998) (NWA), Eskom took the initiative to apply for both waste licence and WUL. These were done to make sure that the power utility protects and conserve the environment and water resources (Eskom, 2014). The power utility was issued with both integrated environmental authorisation and water use licences for its ash disposal facilities. The authorisations are issued with conditions that include construction, operational, administrative, and technical conditions

(Eskom, 2017). Eskom power generation plants are required to comply with conditions of those multiple environmental authorizations to manage the potential impacts on the environment (Eskom, 2017).

In addressing the administrative duplications on environmental authorisations and compliance to the requirements of co-operative governance, such as integrating mechanisms and structures that facilitate environmental management, the DEA and DWS took the initiative to sign MoA on the issuance of EA on waste disposal sites such as ADFs. The selected case study was used because it allowed the researcher the understanding of applicability to the MoA in the multiple environmental authorisations on Eskom ADF's.

This study composes an analysis of six power stations, which are Eskom's ash disposal facilities: Kriel, Kendal, Majuba, Camden, Matimba and Kusile power stations. The motivation for selecting the six sites was based on the following:

- All six sites were issued with both integrated environmental authorisations (IEA) and WUL.
- The sites were also subjected to the MoA process (where an MoA is a tool for co-operative environmental governance).
- Both wet and dry ashing technologies are used (two sites are wet ashing, and four are dry ashing sites).

Table 2.2 below describes the selected study area, while Figure 2.1 below outlines the study area and the ash disposal facilities:

Table 2.2: Description of selected sites

Power Station	Location	Station capacity (MW)	Dry/Wet ashing	Size of ash disposal facility in (Ha)	Ash disposal rate (Mt/a)
Kriel	Kriel Mpumalanga	3000	Wet	172	3.70
Kendal	Witbank Mpumalanga	4116	Dry	583	4.91
Majuba	Volksrust Mpumalanga	4110	Dry	800	3.43
Camden	Ermelo Mpumalanga	1510	Wet	137	1.07
Matimba	Lephalale Limpopo	3990	Dry	700	6.00
Kusile	Witbank Mpumalanga	4800	Dry	1478	1.32

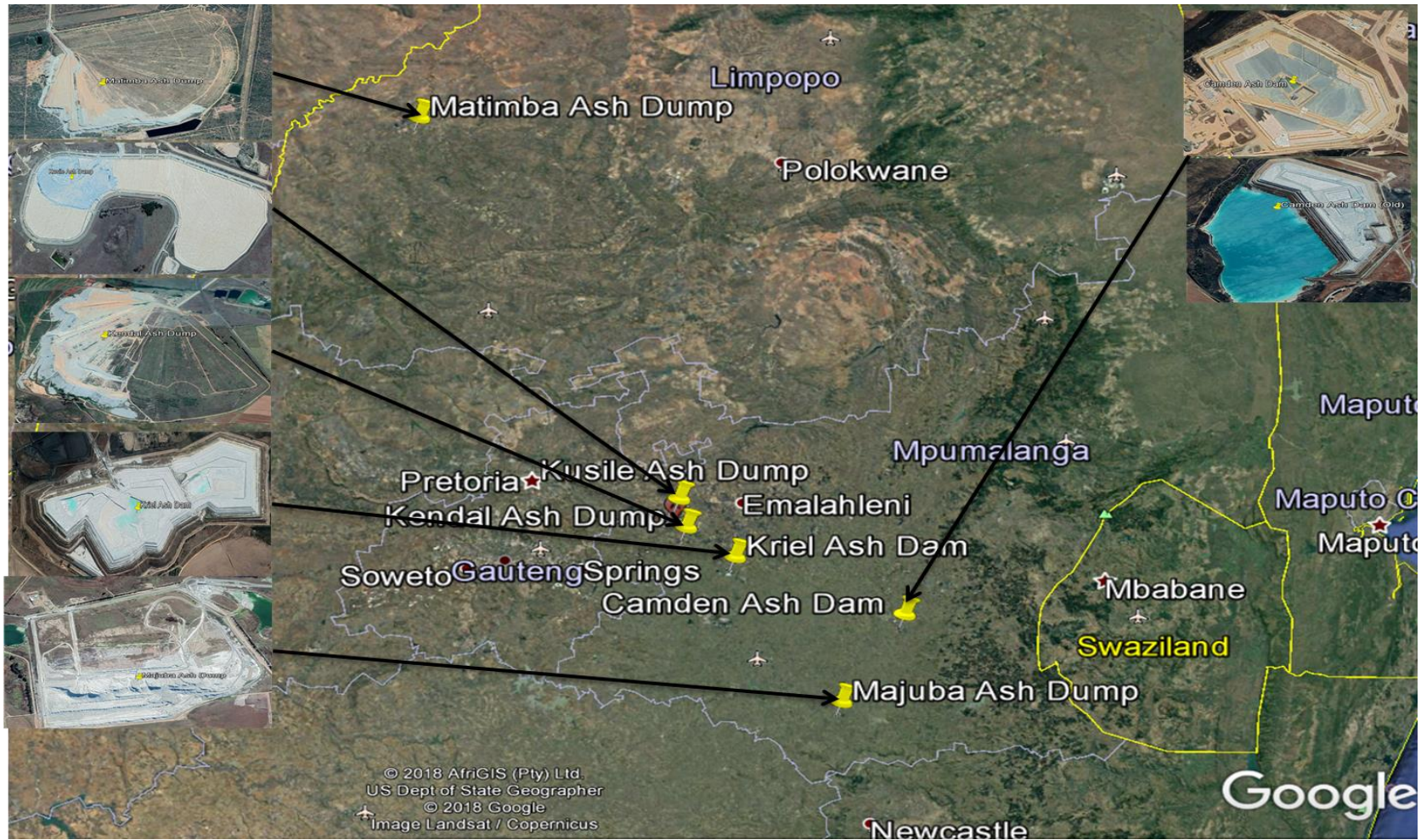


Figure 2.1: National setting of Eskom's ash disposal facilities

The DEA officials, DWS officials, Eskom environmental advisors and environmental consultants worked on Eskom's ADFs, and are used as a sample, where a sample is a portion of a population (Ilker Etikan et al., 2016). However, by population, many often consider a number of people only, but for this study, it does not necessarily mean a number of people (Ilker Etikan et al., 2016), but deferent views of people who worked on waste management authorisations that are subjected to MoA process. In this case, the study refer to the total quantity of cases that are the subject of our research. The sampling method used for these study was convenient sampling because this method is where members of the target population that meet certain practical criteria, willingness to participate and affordable, easy, and the subjects such as review documentation are readily available (Ilker Etikan et al., 2016).

The purposive sampling method, also known as judgment sampling, was also chosen due to the qualities of the participant and because the participants are involved in the process of environmental authorisations of ash disposal facilities (Ilker Etikan et al., 2016). The researcher also used case sampling as a method because here, cases are selected and then examined for its effectiveness in the implementation of MoA (Ilker Etikan et al., 2016). The criterion for deciding on this method is by using the following statements: *"if that group is having problems, then can we be sure all the groups are having problems?"* (Ilker Etikan et al., 2016).

2.5 Data collection

According to Ajayi (2017), data is facts from which conclusions can be drawn. Data as a general concept refers to knowledge that is represented or coded for better usage or processing, and it only becomes suitable for usage after it is collected and analysed (Ajayi, 2017). Data collection can be accomplished through a primary source and or a secondary source (Ajayi, 2017). This study has employed both primary data and secondary data, the primary data was obtained through interviews, and secondary data was obtained from environmental authorisations issued on Eskom ash disposal facilities.

2.5.1 Interviews

This study used interviews as a tool to collect the required primary data. According to Ajayi (2017), interviewing is the best method or tool that is primarily used to understanding reasons and motivations for people's attitudes, preferences or behaviour. A semi-structured interview is considered for this study and was conducted on DWS officials, DEA officials and Eskom senior advisors working on ADF environmental authorisations. A pilot study was conducted with the Eskom employees and authorities with relevant power station ADF's environmental authorisation experience and in order to ensure that the interview guide was appropriately designed to meet the research aim and objectives. The questions were designed based on the research objectives, developed framework and the literature findings (**See Annexure A**).

Due to the sensitive nature of the study, the government officials, Eskom environmental officers, and environmental consultants participating in this research were assured that they would be presented

anonymously in the research report. The participants signed a consent letter before the commencement of the interviews.

2.5.2 Document review

In this study, the secondary data was collected from integrated environmental authorisations, water use licences and the Environmental Impact Assessments (EIA) and water-related study documents used for the application on Eskom ADF's environmental authorisations (i.e., Eskom site's referred to in Table 2.2 and Figure 2.1). These documents were sourced from Eskom's environmental databases.

2.6 Data analysis

According to Sunday (2007), data analysis in qualitative research consists of processes and procedures whereby collected qualitative data moves into some form of explanation, understanding or interpretation of situations that are investigated. Then the data is reduced into themes through a process of coding and condensing the codes before data finalisation (Sunday, 2007). Due to the fact that this study is guided by specific objectives, the inductive approach is a procedure used for analysing qualitative data (Thomas, 2006). The author Thomas (2006) continues to emphasise that *"the primary purpose of the inductive approach is to allow research findings to emerge from the frequent, dominant, or significant themes inherent in raw data, without the restraints imposed by structured methodologies."* Table 2.3 below provides an analytical strategy on the general inductive approach (Thomas, 2006).

Table 2.3: Analysis of a general inductive approach

General	
Inductive Approach	
Analytic strategies and questions	What are the core meanings evident in the text, relevant to evaluation or research objectives?
Outcome of analysis	Themes or categories most relevant to research objectives identified
Presentation of Findings	Description of the most important themes

Thomas (2006) continues to state that the general inductive approach limits the researcher's theory building to the presentation and description of the most important categories, but it is easy to use and provides a procedure for analysing qualitative data that can produce reliable and valid findings. Furthermore, the author Thomas (2006) emphasised that *"discourse analysis provides a detailed account of the perspectives and rhetorical devices evident in a set of texts, while phenomenology seeks to*

understand the lived experiences among people who have had a common experience and the meaning of those experiences." The general inductive approach is not usually used for theory development, but it offers a relatively simple approach for coming up with findings in the context of specific evaluative questions, as is the case in this study (Thomas, 2006).

2.7 Reliability and validity

According to Golafshani (2003), *"the use of reliability and validity are common in quantitative research and now it is reconsidered in the qualitative research paradigm."* To understand the meaning of reliability and validity, it is necessary to present their definitions as outlined by the qualitative researchers.

Reliability is a concept used for *"testing or evaluating quantitative research"* and often used in all kinds of research and to ensure reliability in qualitative research, the *"examination of trustworthiness"* is crucial (Golafshani, 2003). The concept of validity is described by a wide range of terms in qualitative studies. According to Golafshani (2003), the validity concept *"is not a single, fixed, or universal concept, but rather a contingent constructs, inescapably grounded in the processes and intentions of particular research methodologies and projects."*

In order to ensure reliability and validity in the study, the triangulation method is adopted. According to Golafshani (2003), *"triangulation is a strategy used for improving the validity and reliability of research or evaluation of findings."* Golafshani (2003) emphasised this by saying *"triangulation strengthens a study by combining methods which mean using several kinds of methods or data, including using both quantitative and qualitative approaches"*. For the purpose of this study, the researcher collected data through interviews and review authorisations and supporting documents. Thus results and conclusions in this study are based on data collected from multiple research instruments, although use will only be made of qualitative data.

2.8 Ethical considerations

According to Leedy and Ormrod (2010), the following are the key ethical issue that needs to be considered when conducting interviews for research purposes:

- *"It is important that procedures for interviews are laid out in writing, and are clearly explained to interviewees before interviews proceed."*
- *"Interviewees have to be happy with the location of the interview."*
- *"The interviewer should be aware of issues involving his/her own safety when undertaking an interview."*
- *"Confidentiality is an important concern. Interviewees should not normally be named (unless otherwise arranged beforehand)."*

- *“Seek permission. Any recorded contribution, in written form or in notes taken from the interview by the interviewer, should be used in accordance with the wishes of the interviewee.”*

In this study, all these principles were upheld. Respondents were informed about the purpose and nature of the research study, and that participation was on a voluntary basis. Permission was sought and granted by Eskom for the research to use their data. Ethical clearance was obtained from the North West University prior to the commencement of the research project.

2.9 Limitations

The limitation of this study is time and the fact that this is a mini-dissertation. The researcher summarised the information to meet the requirements of a mini-dissertation. The information was collected whilst the participants were in their normal working hours. Some could have been facing work related challenging issues. However, the researcher tried to accommodate the participants in accordance with their convenient time slots for the interviews.

2.10 Conclusion

This chapter reviewed the research design and methodology used to meet the research objectives posed in this study. A summary of this chapter is presented in Table 2.4 by highlighting the significant decisions made to conduct this study.

Table 2.4: Summary of the research design

Level of decision	Choice
Epistemological and ontological assumptions	Interpretive
Research strategy	Embedded single case study
Research Techniques	Interviews, Authorisations and supporting document analysis
Qualitative and quantitative methods	Qualitative
Data analysis	General inductive
A critical review of the research method	Triangulation

CHAPTER 3: CO-OPERATIVE ENVIRONMENTAL GOVERNANCE IN SOUTH AFRICA AND LEGAL PROVISIONS

3.1 Introduction

Co-operative governance is well understood and well documented in South Africa. According to Kotzé (2012), co-operative governance in the South African context is the mechanism or strategy that may be employed to facilitate acceptable and sustainable inter-governmental relations. He argued that: accordingly, *“it seems to be that co-operative governance is based on the decentralised governance structure and that the three spheres working harmoniously together are more likely to address challenges than if they were acting on their own or alternatively in competition with one another”* (Kotzé, 2012). This fact is supported by Mawatsan (2007) in the Environmental Management Framework (EMF) for Ekurhuleni Metropolitan Municipality, by that in formulating the strategy for co-operative governance; he states that *“it is important that different government agencies cooperate in a way that will attempt to address the priority issues in a systematic and logical manner.”* In addition to this, *“the roles and obligations of each agency should be clearly defined, and a mechanism for conflict resolution should be established”* (Ismail et al., 2009).

There are various administration challenges on environmental authorisation because of the authorisation of different environmental media resting with more than one government entity (Nel & Kotzé, 2009). There are widespread concerns regarding this because it leads to duplication of processes when authorising activities that trigger multiple environmental authorisations.

According to Sokhela (2006), cooperative government provisions, as outlined in the South African Constitution, and related environmental legislation, is an innovative concept to resolve problems related to co-ordinating their government functions streamlining their administrative activities when dealing with environmental authorisations. Ismail et al., (2009) see the concept of cooperative government as a tool to resolve challenges relating to duplication of the process when dealing with multiple environmental authorisations. Therefore, it is essential to discuss the co-operative environmental governance agreements and its theoretical basis.

3.2 Environmental governance

In examining the concept of environmental governance, it is important to start by defining governance. According to the literature, governance encompasses broad issues such as the changing relationships between different levels of policymaking in government (Hooghe & Marks, 2001). As with any term shared by numerous fields, governance is restricted by a number of definitions. On the other hand, governance is a way in which stakeholders interact with each other to influence the policies (Muller, 2009). However, Bosman et al., (2004), emphasise that governances are not only limited to process but also includes the structure. Plummer and Fitzgibbon (2004) also support this by saying governance is about management structures function.

It is clear from the foregoing discussion that environmental governance is a broad term. It can be interpreted “as a management process executed by institutions and individuals in the public and private sector to holistically regulate human activities” and effects of human activities on the environment by introducing environmental policy, which in turn helps to change behaviour (Kotzé, 2012). It can also be summarised as a governance strategy aiming to change people’s behaviour in their environment (Muller, 2009).

It is quite clear from the above discussion of governance that in such a complex system, we require a coordinated governance approach (Kotzé, 2012). In archiving sustainable environmental management in South Africa, the country should adopt the CEG model because its environmental management system is fragmented (Muller, 2009).

3.3 Cooperative environmental governance in South Africa

It is well known that all environmental media are integrally linked. Therefore, an integrated approach to environmental management is required, hence the need for cooperation of governance effort within the country’s fragmented system (Kotzé, 2009). This is supported by Fischer (2005) that environmental policies should include the participation of stakeholders when dealing with environmental choices. The concept of cooperative environmental governance has been proposed as a way to allow collaborative partnerships with stakeholders when dealing with environmental issues (Glasbergen, 1998). In many ways, CEG is an extended form of integrated efforts towards archiving sustainable environmental management (Pellizzoni, 2003).

According to Jikijela (2013), CEG involves local representation in the negotiation and implementation of environmental regulation. Furthermore, Kotzé (2009) points out that CEG is one of the most important strategies used to address fragmentation in managing the environment. Co-operative governance can be seen as a tool to ensure that the government department works together to improve service delivery and address administrative challenges. This is emphasised by Kotzé (2012), that CEG allows spheres of government to work together to address bureaucracy challenges. The author Kotzé (2009) continues to illustrate CEG as the link and interaction between and within different spheres of government, government officials, public/private sectors, policies/regulations, and their line functions, see Figure 2.1 below.

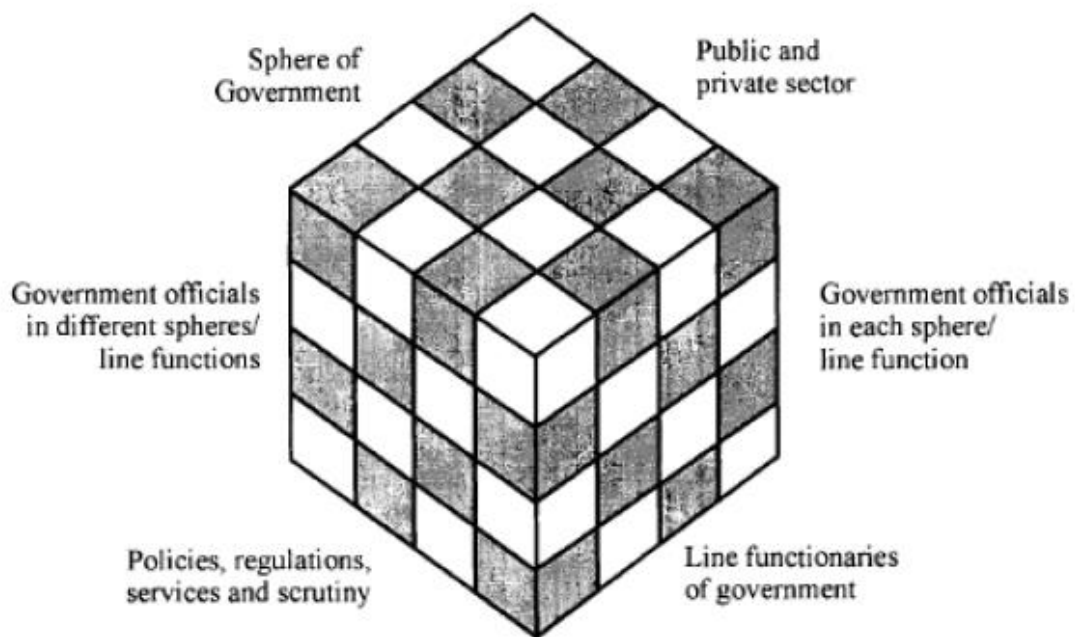


Figure 3.1: Model illustrating co-operative environmental governance Kotzé (2009)

Furthermore, Kotzé (2012) points out that cooperative governance is made up of principles such as fairness, accountability, responsibility, and transparency. These four principles are viewed by Jikijela (2013) as an open democratic system of government.

It is quite clear that CEG is a good example of that all spheres of government are required to establish a mechanism to work together in enforcing legislation. Although problems persist, which are associated with environmental governance. According to Du Plessis (2008), supported by Kotzé (2012), these problems are associated with the fragmentations of environmental governance.

The functioning of CEG will address challenges that are associated with environmental governance due to the fact that they have a significant effect on environmental authorisation (Jikijela, 2013). This is supported by Nel & Kotzé (2009) that the objectives of environmental authorizations can be achieved through the concept of CEG by equipping government institutions to achieve its environmental authorisation objectives. The above discussion illustrates that environmental management and environmental authorisation should not be restricted to any spheres of government or stakeholder.

3.4 Legal provisions and institutions responsible for environmental governance

Section 24 of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) guarantees every South African Citizen 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”.*

In order to achieve the guarantees given in the Bill of Rights, the government must work together and have a uniform approach to dealing with all matters across all spheres and government departments.

Furthermore, the “*Constitution of the Republic of South Africa, 1996 (Act 108 of 1996) establishes a state that supports interaction and cooperation between the three spheres of government on a continuous basis and therefore provides a set of principles to direct the manner and quality of those interactions*” (South Africa, 1996). With the promotion of the principles of co-operation and intergovernmental relations in “*Section 41 of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996), governmental institutions and departments involved with conservation management are encouraged to interact and co-operate with one another in mutual trust and good faith and these interactions are called intergovernmental relations (South Africa, 1996).*”

The principles of co-operative government and intergovernmental relations recognise “*the interdependence of the three spheres of government in South Africa (namely the national, provincial and local spheres) which are distinctive and interrelated and place a duty on the spheres of government to respect each other's powers, functions and institutions and to inform each other of new policies*” (South Africa, 1996).

Therefore, a relationship between a government institution and civil society is necessary. Section 41 (2) of the *Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)* stipulates that “*an Act of Parliament must also establish or provide for processes, structures, and institutions to promote and facilitate intergovernmental relations and provide for appropriate mechanisms and procedures to facilitate settlement of intergovernmental disputes (South Africa, 1996).*”

It is quite clear that in South Africa, co-operative governance is a constitutional imperative, and environmental legislation should adopt it (Jikijela, 2013). NEMA provides for CEG by means of stipulating principles for decision-making on matters affecting the environment (South Africa, 1998a). NEMA is the main legislation that provides for CEG. Chapter 3 of NEMA requires the development of the Environmental Management Plan (EMP) and Environmental Implementation Plan (EIP) mainly to enforce co-operation to environment management (South Africa, 1998a).

South African entities are expected to cooperate and coordinate their environmental responsibilities to avoid duplication of work (South Africa, 1998a). Schedules I and II of NEMA list government departments “*exercising functions involving the environmental management*” and those “*exercising*

functions that may affect the environment,” which are therefore required to develop an EMP and EIP, respectively (South Africa, 1998a). The most important legislation for this research study are outlined in Table :

Table 3.1: Legislation to achieve the constitutional right for an environment that is not harmful to one’s health and well-being

Environmental legislation	Environmental management responsibilities	Government(Lead) authorities
National Environmental Management Act 107 of 1998. South Africa	Environmental management	Department of Environmental Affairs
National Environmental Management: Waste Act, 2008 (Act 59 of 2008)	Waste management activities	Department of Environmental Affairs
National Water Act, 1998 (Act 36 of 1998)	Management of water resources	Department of Water and Sanitation

One other provision of NEMA is the establishment of the Committee for Environmental Coordination (CEC), which aims to facilitate cooperation between entities that have environmental management responsibilities (South Africa, 1998a). NEMA also provides for the establishment of the National Environmental Advisory Forum (NEAF) mainly to advise the Minister of Environmental Affairs on environmental issues (South Africa, 1998a). Furthermore, Chapter 3 of NEMA allows the establishment of institutions that can promote CEG and procedures for coordinating cross-cutting environmental management functions (South Africa, 1998a). Also, the National Water Act (NWA) provides for the establishment of various institutions such as Water Management Area, Catchment Management Agency, Water Users Association, and the international water governance body. All these institutions are essential in the administration of NWA and the management of the country’s water resources (South Africa, 1998b).

It is important to note that both CEC and NEAF are the main structures of cooperative government at the national sphere of government, which may be improved by working groups. According to Muller (2009), these structures can facilitate co-operative governance on environmental issues across all spheres of government.

NEMA also presents a framework for different government departments to facilitate and coordinate activities related to EA. Due to the fact that cooperative governance is critical to environmental authorisation, considering that different pieces of legislation administered by different organs of state may require EA.

3.5 Legislations which provides for environmental authorisation

The environmental activities which require EA in terms of NEMA: EIA Regulations, and Listing Notices, may also require a licence in terms of other legislation (Du Plessis, 2008). These multiple environmental authorisations if not appropriately managed, may lead to duplication of work. The absence of co-operative governance, in this case, may compromise authorisation processes. Legislation and its provisions, which relate to EA, are discussed below:

3.5.1 National Environmental Management Act, 1998 (Act 107 of 1998)

The National Environmental Management Act, 1998 (NEMA), "provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for coordinating environmental functions exercised by organs of the state" (South Africa, 1998(a)).

The Environmental Management Policy for South Africa *"describes the essential requirements for effective environmental governance and proposes steps to achieve cooperative and coordinated governance"* (South Africa, 1997). The National Environmental Management Act (Act 107 of 1998) gives effect to these proposals and steps (South Africa, 1998a). This Act, among other things, provides for environmental management cooperative agreements between the Department of Environmental Affairs and other National Departments, as well as provincial and local authorities (Van der Linde, 2006).

Section 24 of NEMA deals with environmental authorisation and subsection 24(4) states that procedures for investigation, assessment, and communication of impacts of activities on the environment must ensure that there are cooperation and coordination between organs of the state where an activity falls within the jurisdiction of more than one organ of the state. Subsection 24(5) points out that the Minister may make regulations regarding efficient administration processes and processing of an environmental authorisation (South Africa, 1998a). The Minister has made successive EIA regulations in line with this section of the Act.

Subsections 24(7) and (8), point out the provisions on compliance with authorisation requirements in terms of other legislation (South Africa, 1998a). These subsections stipulate that the applicant is not exempted to obtain other environmental authorization from other competent authorities. These provide for alignment of authorisations from deferent authorities without undermining each other's legislative requirements (South Africa, 1998a).

Clearly, NEMA provides a platform for cooperation and/or integration/alignment of authorisation processes. In order to ensure that the objectives of NEMA are met, all stakeholders must be involved. This means, the success of an integrated authorization solely depends on an integrated application procedure.

3.5.2 National Water Act, 1998 (Act 36 of 1998)

To give effect to the principles of sustainable environmental management as outlined in Chapter 1 Section 2(4) of NEMA. The National Water Act, No 36 of 1998 (NWA) was promulgated to give effect to the protection of water resource component of the environment (South Africa, 1998b). In regulating water related aspects in South Africa, the NWA defined water resources and furthermore identified water uses that should be authorised under a tiered authorisation system (DWAF⁵, 2000).

National Water Act, No 36 of 1998 (NWA) also gives effect to the co-operative governance principles of NEMA (South Africa, 1998b). Section 22 (3) and (4) of the National Water Act (Act 36 of 1998) also continues to state that (South Africa, 1998b):

- *“A responsible authority may dispense with the requirement for a licence for water use if it is satisfied that the purpose of this Act will be met by the grant of a licence, permit or other authorisation under any other law”.*
- *“In the interests of co-operative governance, a responsible authority may promote arrangements with other organs of state to combine their respective licence requirements into a single licence requirement”.*

These provisions of Section 22 of NWA supports the alignment of processes by pointing out that responsible authority may promote arrangements with other organs of state to combine their respective environmental authorizations requirements (South Africa, 1998b).

3.5.3 National Environmental Management: Waste Act, 2008 (Act 59 of 2008)

According to Oelofse (2013), historically, *“domestic waste was disposed of in approximately 1203 general waste landfills in South Africa and hazardous waste in 77 hazardous waste landfills.”* A historical challenge with these sites was that they were poorly managed and thus impacted negatively on the environment (Oelofse, 2013). Oelofse (2013), suggests that the main on these landfill sites was that they established before the promulgation of environmental legislation, and thus were not designed to protect the environment nor the public.

As a way to protect the environment and the public from the impacts of poor waste disposal practices, the Department of Water Affairs and Forestry (DWAF) was delegated to implement control systems. The mandate was given to DWAF because the most significant impacts from waste disposal sites usually manifest in the water environment, particularly the groundwater environment (Oelofse, 2013).

The control systems included establishing legal tools, namely, the promulgation of the Environment Conservation Act (ECA, Act 73 of 1989) requirement for permits for the landfill sites (DWAF, 1998). In

⁵ DWAF: Department of Water Affairs and Forestry, now the Department of Water and Sanitation (DWS)

terms of these permitting functions, DWAF was to adjudicate on the issuance of permits for disposal sites in terms of section 20 of the ECA. Taljaard (2011), states that the responsibility for regulating the final disposal of waste in a landfill site was assigned in 1989 to DWAF's water quality management function, in terms of section 20 of the ECA. According to section 20(1) of ECA, *"no person shall establish, provide, or operate any disposal site without a permit issued by the Minister of Water Affairs and Forestry."* This section also makes provision for the Minister to exempt any person or category of person's subject from the need to acquire the permit, subject to such conditions as the Minister may deem fit.

Based on this, the DWAF issued permits and exemptions once the principles of the Minimum Requirements 2nd edition had been complied with by the applicant, in accordance with section 20(3) (DWAF, 1998). The Minimum Requirements on its own did not have any legal standing but became legally binding once incorporated as conditions into disposal site permits (Oelofse, 2013). The Minimum Requirements needed to be complied with for any landfill site/s undergoing the permitting process. The consequence of this situation was that landfills that were not aligned with the Minimum Requirements could not be permitted (DWAF, 1998).

The function of waste management was then moved to DEA, which resulted in the promulgation of the National Environmental Management Waste Act (NEMWA, Act 59 of 2008). Taljaard (2011), argues that the promulgation of NEMWA changed the legal landscape for waste management in South Africa quite significantly, the NEMWA is the first South African law dedicated to waste management and provides a framework for effective waste management practices in South Africa (Taljaard, 2011).

Section 20(b) of NEMWA would provide a detailed regulatory framework for the licensing of waste management activities (South Africa, 2008a). In terms of this Act, listed waste management activities may only be undertaken if a Waste Management Licence (WML) is issued through an application process, and licence applications must be accompanied by documentation and information which would be prescribed by the licencing authority (South Africa, 2008a). South Africa (2008a), clarified that *"the licence application process would require a Basic Assessment or a Full Assessment in terms of the Environmental Impact Assessment regulations, depending on the size and nature of the disposal activity."*

In the process of transforming environmental legislation in South Africa, the debate emanated between ministers of DWAF and the Department of environmental affairs and tourism (DEAT⁶) on Integrated Pollution Control and Waste Management (Taljaard, 2011). The ministers decided to manage the environmental impacts of waste disposal sites in an integrated manner. The promulgation of NEMWA was then drafted to include Section 44 highlighting co-operative governance in waste management licence applications and Section 49(2) which provides that a decision to grant waste management

⁶ DEAT: Department of Environmental Affairs and Tourism, now called the Department of Environment, Forestry and Fisheries (DEFF).

licence in respect of a waste disposal facility should be done on concurrence of the Minister of Water and Sanitation (South Africa, 2008a), through issuance of a Record of Decision (RoD). This concurrence is further shown in section 50 (3) of NEMWA which requires: *“the issuing of a waste management licence for a waste disposal facility must be subject to the inclusion in the licence of any conditions contained in a RoD issued by the Minister of Water and Sanitation regarding any measures that the Minister of Water and Sanitation considers necessary to protect a water resource as defined in the National Water Act, 1998 (Act No. 36 of 1998)”*.

According to Taljaard (2011), a Record of Decision (RoD) is a legal document indicating DWS's decision regarding the licensing of the waste disposal site, which recommends or not recommend the licence to be issued. The RoD, which is now called the environmental authorisation, is mainly addressing conditions related to the protection of the water resource, which should be incorporated into the waste licence. Du Plessis (2008) stated that this working arrangement resulted in DEA and DWS signing a Memorandum of Agreement (MoA) regarding disposal site authorisation. Du Plessis, (2008), continues to state that this MoA aims to streamline administrative process, provide and outlines the roles and responsibilities between DEA and DWS on waste disposal sites authorizations, mainly to improve their working relations and eliminate duplication of work.

3.6 Conclusion

This chapter presents all the necessary information required to meet the first objective of this research study, i.e., to “study co-operative governance and the measures provided for in South African legislation.” All the necessary legislation, which includes NEMA and the media and sector-specific environmental legislation, were identified.

The chapter illustrates that there are legislative provisions aimed at improving working relations between all spheres of government. It continues to demonstrate that the legislation provides that the responsible authorities will take responsibility for the required authorisations, and must therefore also take responsibility for integration and alignment. All this illustrates that the legal framework required to ensure that duplication and unnecessary delays in the issuance of multiple environmental authorisations is already in place. An important finding on this review is that the inclusion of co-operative governance principles in the country's environmental legislation showed that the streamlining process of environmental authorisations it is possible.

The next chapter reviews the literature on the effectiveness of co-operative environmental governance tools and continues by developing a framework to assess the effectiveness of co-operative governance agreements.

CHAPTER 4: EFFECTIVENESS OF CO-OPERATIVE ENVIRONMENTAL GOVERNANCE TOOLS

The co-operative environmental agreements and the philosophy of co-operative policy mechanisms are a fairly new phenomenon. Hence, they have generated substantial interest in the research literature. Given the exponential rate adoption of these agreements globally, it is important to evaluate its effectiveness. It is therefore important to explore the reasons for their incorporation and the possible benefits through their use. Hence, the focus of this study is to contribute to the current debates in the literature by evaluating the effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations in the South African context.

As an introduction to this chapter, the author will discuss co-operative governance agreements, followed by the effectiveness of co-operative governance agreements. Thereafter, this chapter will conclude by introducing a framework to evaluate the effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations.

4.1 Environmental governance tools for cooperation

To minimize the environmental impact associated with anthropogenic activities, environmental authorizations (EA) are used as one of the tools to control anthropogenic activities (Sadler, 1996). The extent to which anthropogenic activities affect the environment also depends upon the effectiveness of the implementation of the EA (Sadler, 1996). However, an EA is a product of the decision-making process, which entails a need to maintain a balance in environmental protection and development (Steenkamp, 2009). Such a decision-making process involves exchanges of information between the developers and the state. With regard to ash disposal facilities (ADF), the process within the state involves the two government departments, namely, DEA and DWS. The government departments developed MoA in order to support the concept of environmental governance.

Furthermore, there are other several structures that are developed and coordinated to enhance environmental governance. According to Du Plessis (2008), there are constitutional and non-constitutional structures that are developed to facilitate joint and co-ordinated decision-making on environmental issues. To enhance environmental governance the Inter-Governmental Forum (IGF), Ministerial Forums (MINMECS) and the Premier Forum were formulated (Du Plessis, 2008). Du Plessis (2008) continues to state that these forums were only established to formulate guidelines for decision-making by government, while ministerial committees focused on specific environmental issues. Despite all these initiatives, fragmentation is still experienced and government departments are taking responsibility to address environmental issues in filling the gaps (Kotzé, 2005).

Section 7 of NEMA allowed for the establishment of an environmental coordination committee to align the policies, programmes, and activities of government departments (South Africa, 1998a). Then sub-committees under cooperative environmental committees were established but experienced challenges

on issues of decision making (Du Plessis, 2008). Then section 35 of NEMA “*brought a new element to co-operative governance by making provision for environmental management cooperation agreements between government departments to address environmental issues*” (South Africa, 1998a).

In 2004 the South African parliament initiated a cooperative agreement between government departments in terms of the National Nuclear Regulator Act of 1999 (Du Plessis, 2008). This author (Du Plessis, 2008) further points out that all government departments were obliged to co-operate with each other to ensure coordination of their activities, to manage radioactive material and to sign cooperative agreements with National Nuclear Regulator (South Africa, 1999a). This agreement provides for a working relationship with regards to ensuring the effective monitoring, management, and control of nuclear hazards, between DEA and the National Nuclear Regulator (NNR). According to Seekoe (2017), this agreement experienced regulatory challenges due to the fact that the EIA process and NNR licensing process differ substantially, for example:

- EIA processes focus on assessing the potential impacts of radiological releases (including normal operational releases and upset conditions), while
- NNR licensing process focus is to demonstrate beyond a reasonable doubt that defence-in-depth measures (multiple, redundant, and independent layers of safety systems) are employed.

While most studies have shown that mechanisms on cooperative agreements are in place, government departments still do not always cooperate with the requirements of those agreements (Kotzé, 2007). These challenges resulted in newly developed legally binding initiatives to ensure co-operative governance on environmental matters to enforce environmental policies and legislation (Du Plessis, 2008). Government department’s signs MoA, and such examples are seen between DEA and DWS regarding waste disposal site authorisations. However, an increased number of authors have questioned this MoA’s effect by highlighting that its objectives are not met because they are concluded at a high political level without buy-in and a clear understanding from officials on the ground (Du Plessis, 2008).

4.1.1 Co-operative Environmental Governance Agreements

Traditionally, international policymakers have relied on formal “command and control” legislation as the primary means of providing environmental management on specific environmental media (Fischer, 2005). This form of legislation uses permits to achieve the legislative framework (Du Plessis, 2008). This legislation is always aimed at managing the environment for specific environmental media (Kotzé, 2012). In order to be effective, this type of environmental legislation requires co-operative agreements with other environmental statutes to manage and enforce all environmental aspects (Fischer, 2005). Due to its specific-media-based approach this type of legislation often does not effectively address the overall environmental impact emanating from an activity (Fischer, 2005).

During 1960, the focus of environmental management shifted from the traditional ways of environmental management to an integrated approach (Fischer, 2005). These policy change approach needed the collaboration of all stakeholders during the authorisation processes (Du Plessis, 2008). These lead to the signing of cooperative environmental governance agreements (CEGA), which could assist in achieving the objectives of cooperative governance (Kotzé, 2012). Both Kotzé (2007) and Du Plessis (2008), argue that these agreements are being signed but their intended objectives are not met. Furthermore, these agreements are constantly challenged both internationally and locally, “*which suggests that their decisions do not always amount to good environmental governance*” (Snyman, 2003). The effectiveness of these agreements will be discussed later in this study.

On the other hand co-operative environmental governance agreements are meant to address all the foregoing problems that are associated with fragmented environmental authorisations (Du Plessis, 2008). It is therefore important to consider the concept of these agreements and their theoretical basis. This is then discussed in the next section.

4.1.2 Memorandum of Agreement as Cooperative Environmental Governance

Since these agreements are a core concept in this research, it is important to start by defining this concept. The Commission of the European Communities (1996) defined environmental cooperative agreements as:

A contract between public environmental authorities and on the other hand, between individual companies and associations of companies concluded with the aim to improve working relations, protect and restore the environment.

The Commission went on to explain the evolution of the concept as follows (CEC, 1996):

Whereas previous environmental measures and management tended to be prescriptive and uncooperative in character and with an emphasis on ‘thou shall not’ the new strategy leans more towards a ‘let’s work together’ approach. The new approach implies, in particular: A reinforcement of communication with stakeholders and the encouragement in appropriate circumstances, of environmental agreements and other forms of environmental regulations.

The South African governmental environmental fraternities define the cooperative environmental agreements as (Fischer, 2005):

A commitment for improving working relations in improving the environmental management, performance, developed through bargaining between public authority and stakeholders.

Although environmental governance is a concept firmly established globally, its agreements are not yet explored in detail (Taljaard, 2011). According to Kotzé (2012) fragmentation remains an international and local challenge to enforce these agreements, which affects service delivery by government

departments responsible for executing environmental governance mandates. Clearly, despite all the signing of these agreements, the challenges are still experienced (Fischer, 2005).

The South African government environmental departments intend to enhance the efficiency of its environmental policy by signing MoA as a supplementary regulatory instrument meant to complement existing regulatory instruments (Du Plessis, 2008). Traditionally, environmental regulations, for a different environmental medium were often dealt with in silos. The South African environmental government department refers to MoA as “*a formal business document used to outline an agreement made between two separate entities*” (Surbhi, 2014). The author continues to emphasise that this MoA’s usually comes before a detailed contract or agreement between the parties and are used by organisations in working together on an agreed purpose or to meet an agreed objective. This is supported by Zender (2005) who views MoA as an agreement between parties that strive to archive certain objectives. Furthermore, Surbhi (2014) continues to emphasise that the agreements should be written and signed between parties.

In South Africa, the option of MoA was used due to the fact that agreements are said to be legally binding. According to Surbhi (2014), legally, contracts are binding agreement and agreement is said to be reached when a contract is accepted and signed off. However, some contracts require material evidence, documents emphasising the intention of parties to the contract or other policy of considerations, to stand in the court of law (Surbhi, 2014). These were evident from the ruling in the court case of Juliano v. Smith, (2013), that MoA’s are more “*straightforward because once an agreement is concluded, accepted and signed by all parties involved, the agreement then becomes a binding promise that parties have agreed upon*”. “*In the event that one party fails to fulfil his/her end of the agreement, and then the other party can take them to court*” (Juliano v. Smith, 2013).

According to Khanna, (2001) MoAs are co-operative environmental agreements seen as a form of co-regulation that complements the traditional environmental regulation policy and command and control regulations. The following sections will discuss the different types of co-operative governance agreements.

4.2 Types of Co-operative Environmental Agreements

As mentioned previously, “*environmental policy in the 1970s and early 1980s was mainly driven by regulations of emissions, environmental quality, processes and technologies*” (Zickiene, 2017). However, during the “*1980s and the 1990s,*” the interest of authorities focused on cooperative environmental agreements as new regulatory tools for environmental issues (Zickiene, 2017). In 1997 the European Environment Agency concluded that environmental agreements will include voluntary agreements and negotiated agreements or contracts, which aims to protect and restore the environment (EEA, 1997). Several authors outlined reasons to engage in these agreements that were stimulated by a number of factors such as:

- to address the global challenges experienced on environmental authorisation fragmentation (Vermark, 2005);
- “increasing recognition of the limitations of government in general, and of traditional command and control systems” (Zickiene, 2017);
- the need to integrate environmental legislation to minimise duplication of work on environmental authorisations (Nel et al., 2005) and
- to improve communications with all stakeholders and self-regulatory systems on environmental issues (Gebers, 1998).

Internationally cooperative environmental agreements have become very popular and are often discussed tools of environmental authorisations (Gebers, 1998). Gebers (1998), conducted surveys and studies in the European Union that showed that most popular agreements are voluntary agreements and are vital elements of environmental policy. While in South Africa the most used and popular national cooperative environmental agreements are MoA (Du Plessis, 2008).

Clearly, despite the various types of cooperative environmental agreements, MoA should provide a platform for cooperation and/or integration/alignment of authorisation processes that are legally binding (Mullar, 2009). The next section outlines these types of agreements.

4.2.1 Good Neighbour Co-operative environmental agreements

In many locations throughout the United States, communities suffer negative environmental impacts from industries, which results in conflicts (Douglas et al., 2004). In addressing these conflicts the government provided some protection to the local community through associated permitting programs (Douglas et al., 2004). However, these protections are viewed by communities as inadequate and create regulatory costs (Fischer, 2005). Then the United States addresses these conflicts through the use of agreements negotiated with communities and industries (Douglas et al., 2004).

These are negotiated agreements entered into by authorities, communities, and industries (Fischer, 2005:30). Environmental Pollution Control Agreements (EPCA) signed in Japan are examples of such agreements (Tsutsumi, 1999). They serve to set environmental limits, which can be negotiated and are not legally binding (Tsutsumi, 1999). According to Douglas et al., (2004), good neighbour agreements (GNA), are not legally binding due to the fact that they seek to retain industries within regions, and help them to shape their practices to better respect and protect community values. *“It is this quality, more than any other, that is at the heart of the “good neighbour” terminology”* (Douglas et al., 2004).

GNA's are generally effective and are able to resolve environmentally-oriented company-community conflicts, but they are not needed everywhere (Douglas et al., 2004). However, where the safety net of environmental law and regulation is inadequate, GNAs can be a valuable environmental authorisation tool (Tsutsumi, 1999). Although GNA's are highly desirable it may not be essential to achieving implementation successes, due to the fact that they are not legally binding (Fischer, 2005).

4.2.2 Voluntary co-operative environmental agreements

Since the late 1980s, there has been an increased use of co-operative environmental agreements as policy tools in European Union Member States, especially in industry and waste management (Zickiene, 2017). Most of those agreements were voluntary agreements. According to Zickiene (2017), there is no standard definition of voluntary environmental agreements due to the fact that so many different names and tools are developed to enhance multiple environmental regulations.

Voluntary agreements are mostly seen and been implemented in Europe (Lynn, 2005). Since the 1990s industries have been signing these contracts to improve energy efficiency and reduce GHG emissions (Lynn, 2005). These agreements are mostly signed between the government entities and industries, which focuses its attention on regulating and managing energy efficiency and emissions (IEA, 1997). These agreements are said to improve the attitudes of industries on emissions and energy efficiency. Globally these agreements are said to be effective when implemented within a comprehensive and transparent framework (IEA, 1997).

VEAs are increasingly being looked to as a possibly appropriate instrument to help address environmental problems and concern that command-and-control legislation and regulation are too burdensome applied differently and fragmented (Lynn, 2005). The motivations for VEAs are not only to avoid arguably cumbersome and administrative challenges on authorities but also to improve stakeholder involvement in environmental authorisations (Lynn, 2005). The only main challenge is that these agreements may not be efficient in achieving its intended objective when agreements are not legally binding. This is supported by Krarup & Ramesohl (2002), that *“the most effective agreements are those that are legally binding, set realistic targets and have sufficient government support.”*

4.2.3 Negotiated agreements between government authorities and industries

Negotiated agreements are said to be between government departments and industries. The main aim of these agreements is purely negotiated environmental objectives such as reducing GHG emissions (Zickiene, 2017). Negotiated environment agreements are considered to be the most meaningful in environmental authorisation. They are defined as commitments and contracts as a result of negotiations between government departments and industry (Zickiene, 2017). Such agreements improve communications and trust between the government and industries (Zickiene, 2017).

Fischer (2005) explains that these agreements are used to reduce both air and water pollution in Japan. These agreements are legally binding but purely voluntary and contain clear timeframes and objectives (Fischer, 2005). The challenge with these agreements is that they are only between governments and industries, communities are not consulted or represented on these agreements (Zickiene, 2017).

4.2.4 Environmental co-operative agreement between NNRA and the DEA

The South African national government departments also enter into these agreements. The agreement between the National Nuclear Regulator Authority (NNRA) and the DEA pertains to the monitoring and control of radioactive material or exposure to ionising radiation. This is one example of an environmental co-operative agreement in South Africa (South Africa, 2008c). The National Nuclear Regulator Act, 1999 (Act No 47 of 1999) and Regulation No 706 of 24 May 2002, is mandated under Section 6 to conclude cooperative agreements with other national departments on the management of the environment (South Africa, 2008c).

Cooperative agreements concluded in terms of Sections 6(2) and published in terms of Section 6(4) of the National Nuclear Regulator Act, provides working relationships with regards to environmental impacts issues between DEA and NNR, with regards to (South Africa, 2008c):

- *“Ensuring the effective monitoring and control of nuclear hazards;*
- *Coordinating the exercising of such functions;*
- *Minimizing the duplication of such functions and procedures regarding the exercising of such functions; and*
- *Promoting consistency in the exercising of such functions”.*

The structure of this environmental co-operative agreement is formal in nature and legally binding. The agreement consists of the following elements (South Africa, 2008c):

- *“The scope as highlighted above,*
- *Time and period for the implementation of this agreement,*
- *The co-ordination of functions in respect to the monitoring and control of radioactive material and exposure to ionising radiation,*
- *Measures to resolve non-compliance with the agreement,*
- *The resolution of disputes in respect of the interpretation or application of the agreement, mechanisms, and procedures for co-operation between the parties,*
- *Safety standards and the coordination of monitoring and enforcement functions,*
- *Record of the delegations,*
- *The provision of expert assistance and support,*
- *The sharing of relevant information,*
- *The coordination of responses to incidents or accidents, and*
- *Amendments to the agreement”.*

Section 6(2) of the Nuclear Regulator Act (NRA) is another way to address environmental co-operative agreements by different organs of state, with the purpose to ensure cooperation for environmental compliance (Seekoe, 2017). Although there are several National Nuclear Regulator Authority

Agreements (NNRAAs) that have been concluded between the NNRA and other stakeholders not necessarily national departments, for the purpose of this research only one example will be discussed between NNRA and the DEA (South Africa, 2008c).

The environmental cooperative agreement between the NNRA and the DEA outlines, amongst others, the management and control of radioactive substances. One of the elements it seeks to address is co-operation between the national, provincial and local governments, to coordinate functions to effectively control radioactive material and manage exposure to ionising radiation (South Africa, 2008c).

According to Seekoe (2017), the challenge for such agreements was found to be controlling relations between departments, which are naturally expected to cooperate through contracts or binding agreements from the government department (Seekoe, 2017). The source of such problems is associated with fragmentation in environmental governance and DEA as a lead agent on environmental issues is weak in terms of jurisdictional, statutory and executive authority, and enforcing this signed agreement (Bosman et al., 2004). Furthermore, Seekoe (2017) highlight the fact that this agreement does not make mention of a public participation procedure which means that it was not concluded with consideration to Section 35(2) (b) of NEMA; states that *“conclusion of environmental managements cooperation agreements may be entered into after compliance with such procedures for public participation as may be prescribed by the Minister”* (South Africa, 1998a).

4.3 Effectiveness of co-operative environmental governance agreements

There are several environmental authorisation agreements that have been signed and adopted, which has generated substantial interest in the research literature. The majority of studies conducted globally assessed the effectiveness of environmental assessments, policy implementation, and environmental management co-operative agreements concerning improving environmental performance, and thus, it conforms to its established provisions, principles, and objectives (Massoud et al., 2010). As mentioned previously by Sadler (1996), a co-operative governance agreement is effective when its intended objectives are attained.

Various studies that have been conducted globally suggest that measuring the effectiveness of co-operative governance agreements; firstly should examine the theory of governance in this context (Bevir, 2007). Since the 1980s, governance was explicitly used to describe changes in the nature and role of the government (Bevir, 2007). These transformations shifted from hierarchic bureaucracy toward the use of markets and networks, especially in service delivery (Torfing, 2012). The effects of the reforms were intensified by global changes, and theoretically, it is understood that governance expresses a widespread belief that the government depends on government departments to ensure implementation and deliver its policies and regulations (Bevir, 2007).

On the other hand, governance is used to describe patterns of the rule that arise when government dependent upon government departments or when the government itself plays little or no role (Bevir,

2007). Sahay (2016) continues to emphasise that corporative governance is the system by which government corporations are directed and controlled, and its structures allocate rules and responsibilities among different participants in the cooperative governance agreement. Likewise, co-operative governance is patterns of law within government institutions that are, to the systems, institutions, and norms by which corporations are directed and controlled (Sahay, 2016).

According to Bevir (2007), supported by Sahay (2016), outlined that the need for effective co-operative governance agreements stems from the obligation of the corporation to fulfil the expectations and objectives of its agreements. These authors Bevir (2007) & Sahay (2016), further point out that for a corporation to fulfil its objectives and meet the expectation of stakeholders, it needs to perform. Khan (2016) highlights that *“the performance of a corporation is dependent on the effectiveness of the governance process, which is in turn, dependent on the individuals involved in the process of governance”* (Khan, 2016).

When effectiveness is assessed, according to Beriv (2007), effectiveness indicators need to be selected. The selected effectiveness indicator should be specific for the assessment. These choices result in debates about the appropriateness, conclusive, and completion of analyses of effectiveness (Sahay, 2016). Torfing (2012), states that those choices should be motivated by performance and the critical factor of corporation performance should be through governance networks because a governance network enhances the following:

- *“Inputs legitimacy by involving more actors in public decision making”*
- *“Output legitimacy by mobilizing specialized knowledge, facilitating coordination, and building ownership.”*

This point is taken further by Sahay (2016) that inputs should be clear, relevant, of good quality, and be time-based, while outputs should consider the views of other stakeholders, processes adopted in realizing the productions, and the impact on decisions resulted in the outputs. The preceding discussion shows that governance networks will narrow the gap between democracy and effectiveness (Torfing, 2012).

Governance network is one amongst several modes of governance that is a hierarchy, market, and networks. These research studies include several networks and hierarchy modes encompassing, legal sanctions, plurisenorgtric, interdependence, negotiated, and trust and obligation (Torfing, 2012)(see Table 4.1 below outlining elements of modes of governance used to assess effectiveness).

Table 4.1: Elements of modes of governance

	Hierarchy	Market	Network
Coordination	Unicentric	Multicentric	Plurisentric
Relationship between actors	Subordination	Independence	Interdependence
Decisions based on	Substantial value	Procedures	Negotiated
Compliance	legal sanctions	Economic sanctions	Trust and obligation

Some research efforts and discussions have focused on the assessments of effectiveness using triangulation theory of effectiveness by (Sadler, 1996). The term “effectiveness” is explained by Sadler (1996) *“as to whether something works as intended and meets the purpose for which it is designed.”* Sadler (1996) continues to emphasise that the performance of an agreement involves the assessments of the implementation process, which allows a clear understanding of how the objectives of the agreement were met and how resources were used to achieve the objectives (Sadler, 1996). The framework, developed by Sadler (1996) to measure the effectiveness looks at policy measures, planning approach, and the third step analyses the implementation measures. It should, however, be noted that the overall effectiveness implementation is determined by understanding the purpose for which agreements implementation takes place (Kotzé, 2007).

Although there are strategies and exciting initiatives to evaluate effectiveness, there are still challenges posed by disjointed and fragmented governance (Snyman, 2003). In addressing these challenges initiatives were proposed. One of those being a policy implementation instrument, co-operative governance at the operational level through aligned authorisation processes (Nel et al., 2005). The question remains whether these initiatives are effective or whether the co-ordination between environmental authorities has met its intended objectives and supported the mandate of the South African constitution (Du Plessis, 2008).

A review of literature and debates relating to the effectiveness of authorisation processes suggests that critical discussions revolve around what is required in the policy, how are measures implemented in practice, and how effective are these measures? According to Sadler (1996), it all revolves around the following cross-cutting and interrelated themes (Figure 4.1).

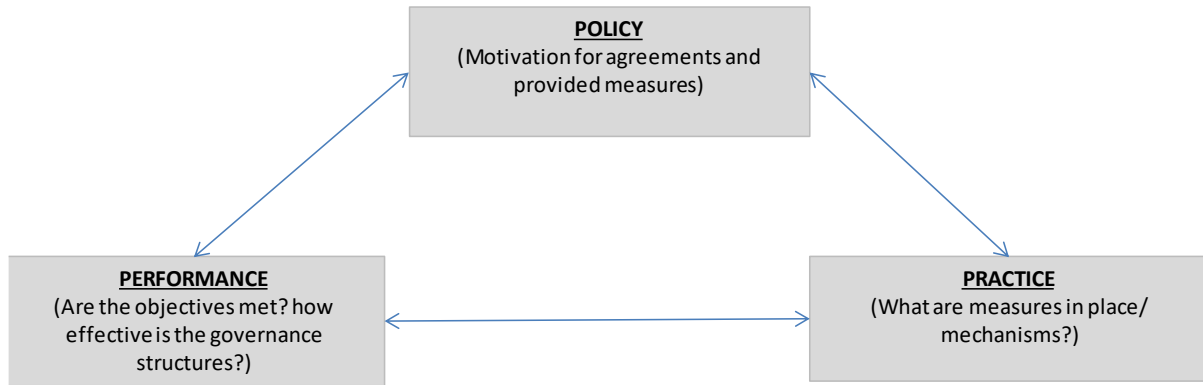


Figure 4.1: Efficiency of authorisation processes (Sadler, 1996)

The next sections evaluate the literature on the effectiveness of co-operative governance agreements as it relates to motivations, challenges, and mechanisms for adopting co-operative governance agreements.

4.3.1 Motivations for adopting co-operative governance agreements

According to Qi et al., (2011), motivation is any wish, desire, or preferences that concern the outcome of a given reasoning task. Motivations for adopting environmental co-operative agreements have been analysed (Meadowcroft, 1998). According to Snyman (2003), there are three kinds of motivation in which government department will want to sign co-operative governance agreements i.e.

- Lack of co-operative governance
- Environmental challenges and;
- Capacity constraints during the authorization processes.

It has been argued by Kotzé (2012) that co-operative governance is an elegant strategy to overcome environmental fragmentation. Kotzé (2012) continues to motivate that the implementation of co-operative governance agreements arrangements will help to facilitate the increased co-operation and alignment function policy processes at the strategic level, and these might translate to co-operation and alignment at the operational level.

Kotzé (2005), also motivates that to see the benefits of co-operative governance, the South African government should adopt the established integrated environmental governance practices in European countries, generally based on the Integrated Pollution Prevention and Control Directive 1996 (IPPC Directive). The directive aims to integrate environmental authorisation processes. This is supported by Snyman (2003), that authorisation processes must become legally uniform and to achieve integration of authorisations. The South African context developed environmental management systems trying to align multiple authorisations by stipulating timeframes for each process (South Africa, 1998a). This is

supported by Du Plessis (2008) that by outlining timelines of different authorisation, processes will eliminate duplication of work by different authorities.

Meadowcroft (1998) motivates that these types of agreements will allow stakeholders to manage the environmental problems in industrialised democratic states successfully. The approach involves stakeholders defining and implementing solutions to environmental challenges (Glasbergen, 1998). Such negotiated environmental agreements can also be described by collaborative environmental administration (Zickiene, 2017). The author Zickiene (2017) continues to emphasise that such initiatives are offering alternatives to address those traditional regulatory strategies in dealing with more complex environmental challenges.

Snyman (2003) motivates by outlining potential benefits that these agreements will resolve the current challenges of:

- A multiplicity of legislation of which the interpretation is not always clear
- A multitude of authorisations and permits to apply for from various authorities and
- The challenges of capacity and incompetency.

Du Plessis (2008) continues to emphasise that many government officials do not have the necessary capacity and competence to evaluate the information provided to them in authorisation applications, and by engaging in agreements with relevant competent authorities, it will eliminate such challenges. This is supported by Steenkamp (2009) that studies show that authorisation delays are often caused by inadequate skills of officials and serious resource capacity problems.

4.3.2 The challenges posed by environmental agreements for cooperative governance

Several authors have maintained that environmental agreements do not necessarily lead to significant benefits for co-operative governance (Lehman, 2009; Blackman et al., 2009; Khan, 2016; Du Plessis, 2008). Non-achievement of the expected benefits could be due to several challenges. Some of the difficulties may be related to the performance of the implementation of the agreement (Khan, 2016); uncertainty on voluntary negotiated agreements (Lehman, 2009); the in-tend of cooperative environmental governance (Du Plessis, 2008).

Based on their extensive literature review, Khan (2016) outlines that the performance or effectiveness of agreements implementation can be categorised into three dimensions such as (i) output, outcome, and outcome of agreements (ii) impact on the supporting legislation; and (iii) measurement whether the agreement leads to the effective authorisation process. Khan (2016) continues to state that successful agreement outcomes depend not only upon designing effective agreements but upon managing their implementation.

Until the early 1970s, implementation was regarded as simply putting the policy into practice (Khan, 2016). This viewpoint changed when Khan (2016) outlined the constraints associated with agreements implementation. The author Khan (2016) stated that many policies and agreements are not implemented or executed according to their design. Agreements are poorly managed and compromised by political interference (Du Plessis, 2008). Du Plessis (2008) continues by stating that sometimes personnel are not available or sometimes frontline implementers are not capacitated.

Policy and agreements design may also be poorly structured (Khan, 2016). Moreover, the implementers of the agreement may be found to be non-cooperative. Some literature confirm that proper implementation of any policy or legal agreements can be undermined due to lack of sufficient resources, lack of a competent staff, lack of inter-organisational communication, lack of professional and technical resources, lack of clear delegation of authority, lack of administrative capabilities, and bureaucracy on government department (Khan, 2016).

Based on the voluntarily negotiated agreements Lehman (2009) raised a concern that these methods are not clearly understood. The lack of certainty regarding the role of *“traditional command and control regulation and the use of environmental agreements is a challenge”* (Seekoe, 2017). Voluntary environmental agreements *“are blamed for regulatory capture,”* which is defined by Lehman (2009) as *“the ability of the industry to dictate the path of legislation or to predict and stall legislation.”* The challenge becomes that regulators become comfortable, and they overlook important environmental non-compliances (Fischer, 2005). Also, the lack of strong environmental legislation posed a challenge for the implementation of voluntary environmental initiatives (Lehman, 2009). Furthermore (Fischer, 2005) raised a concern that voluntary agreements hinder the effectiveness of traditional environmental regulation. The foregoing discussion shows that voluntary agreements should be used as a supporting tool and not as a substitute to traditional command and control environmental regulation (Fischer, 2005).

According to Snyman (2003), the main challenge in the South African context is government departments are not cooperative to the enforcement of environmental policies, legislation, and the new mechanisms developed to ensure co-operative environmental governance, such as MoAs. Du Plessis (2008) raised a concern that this MoA regarding waste disposal sites authorisation is not effective because it is concluded at a high political level without buy-in from officials on the ground. Despite all the initiatives for cooperative environmental governance and legislative structures created by South African government officials are still sometimes unwilling to cooperate (Du Plessis, 2008). Du Plessis (2008), studied the reason for the lack of cooperative governance even in the presence of agreements, and she summarised them as:

- *“No comprehensive policy and legislative agenda; new initiatives are treated independently.”*
- *“Developmental, economic, and environmental issues are dealt with separately.”*
- *“Lack of implementation of policies, principles, and legislation, i.e., mandate of different government departments in legislation overlaps or contradicts each other”*
- *“The roles and responsibilities of role players are not spelled out”*

- *“Efficiency and effectiveness of decision-making, due to Bureaucracy and incompetence of officials.”*
- *“It is not clear which legislation takes precedence on other activities, which results in confusion between government officials interferes with each other’s competencies.”*
- *“A lack of communication of policy matters; to government officials and other stakeholders.”*

According to Du Plessis (2008) cooperation should not only be at the government level, but also at the public level, which will ensure the success of the policy or working document, financial and technical resources and the success of this tools will depend on the level of participation by the stakeholders and the nature of the cooperation (Du Plessis, 2008). These was supported by Steenkamp (2009) that the alignment of authorisation processes would result in the public being better served, by extending the involvement of the public.

4.3.3 Performance: Mechanism for environmental agreements

When the effectiveness of agreements is assessed, the analyst chooses a set of indicators of organisational agreements (Bevir, 2007). The choice of one set of standards for effectiveness leaves other measures out of specific assessments (Sahay, 2016). Although some of the options can rise to a debate about the completeness and validity of analyses of effectiveness (Bevir, 2007).

The measuring instruments should reflect the performance of the organisation's agreements. According to Sahay (2016), the performance of the organisation agreements should be measured continuously based on its inputs and outputs. The effectiveness of these agreements should be safeguarded by continuous monitoring of its performance in relation to its intended objectives (Du Plessis, 2008).

Based on Steenkamp (2009), there are extensive environmental policies, legislation structures, and processes to measure performance on sustainable environmental governance. Steenkamp (2009) continues to state that there is a modern and comprehensive framework within which environmental governance may be executed.

Current policies provide interesting initiatives to address fragmented governance processes, one of which is the strategy on co-operative governance (Snyman, 2003). The strategy and its supporting written agreements promulgated in terms of the NEMA has objectives that should be complied with (Snyman, 2003). The purpose of the agreements in running multiple authorisation processes is governed by the constitution, and its performance and effectiveness rely on the relevant authority (Vermaak, 2006).

Following the growth of interest of cooperative management, mainly the functioning of networks and partnerships, it has let to interest in evaluating co-operative environmental governance systems (Muller, 2008). Due to the fact that our institutions are fragmented, a diagnostic tool was developed to assess

the effectiveness of these systems (Muller, 2008). Adopted from Muller (2008), a framework was developed to assess environmental governance structures (Table 4.2).

Table 4.2: Framework for the assessment of environmental governance structures

Criteria	Description
Scope	<i>"The set of concerns which is addressed through the coordination arrangements, regardless of whether they are environmental policies or management activities."</i>
Position	<i>"The stakeholders and role-players involved in the coordination activities, and their roles in the setting (e.g., agency, user group, coordinator, etc.)."</i>
Boundary	<i>"How specific individuals and stakeholders enter or leave those positions (e.g., whether through appointment, nomination, or election)."</i>
Authority	<i>"The coordination activities (i.e., information exchange or conflict resolution) in which position holders can or cannot participate, as well as the constraints on autonomy and individual action and the basis of power (e.g., law, plan, administrative policy or informal agreement)."</i>
Information and knowledge management	<i>"The types, forms, timing, and processes of information exchange among the different position holders (e.g., shared database, monthly meetings, or electronic networks)."</i>
Decision making	<i>"The position holders' procedure for making collective decisions and resolving conflicts (e.g., using consensus or voting procedures)."</i>
Pluriformity	<i>"The extent to which the networks are integrated, in so far as this will influence their likelihood of producing effective coordination (such as their level of integration determining whether they can be treated as a single organisation, or need to be treated as semi-autonomous organisations)."</i>
Interdependence	<i>"The extent of interdependence between the different entities making up the network, in so far as this influences styles of interaction and relationships (e.g., loosely coupled or closely interconnected), which in turn affects their likelihood of producing effective coordination."</i>
Formality	<i>"The level of formality, in so far as this influences their likelihood of producing effective coordination."</i>
Instruments	<i>"The nature of the instruments used (i.e., planning, formal regulations, or contracts) as this influences their likelihood of producing effective coordination."</i>
Leadership	<i>"The presence of clear government commitment and leadership at the highest level effectively communicated to the various sectors of government machinery and across levels of government."</i>
Institutional	<i>"The degree to which jurisdictions are aware of, and primed for, engaging each other in collaborative governance of the different entities in terms of the level of citizen and</i>

Criteria	Description
readiness	<i>community interest and involvement the availability of existing institutions and organisations for regional governance the degree of practical experience in formal and informal cross-sectional coordination and cooperation the level of knowledge and appreciation of the missions, goals, and objectives of the other participants."</i>
Redundancy	<i>"This occurs where the overlap is an outcome of cooperative arrangements with two or more organisations performing the same task."</i>
Incoherence	<i>"This arises where cooperative arrangements are characterised by policies with the same clients, who have different goals and requirements."</i>
Lacunae	<i>"These are marked by a failure of the cooperative arrangements, because of the absence of any organisation performing a necessary task."</i>

These networked cooperative governance models present an opportunity to assess both the successes and failures of our systems. According to Muller (2008), the assessment tool has proved to be useful in evaluating cooperative systems and the effectiveness of the institutional arrangements. In the next section, we conclude by mapping the characteristics of the tools of the co-operative governance systems, network modes, and the cross-cutting, interrelated themes of policy implementation effectiveness, in developing a framework of the effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations.

4.4 Developed framework to evaluate the effectiveness of cooperative governance agreements

Based on the discussions above, the following Framework, outlined in Table 4.3, adapted from Torfing (2012), Steenkamp (2009), and Muller (2008), is proposed. The framework was used in this study as a basis for evaluating the effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations.

Table 4.3: Framework to evaluate the effectiveness of cooperative governance agreements

The dimension of effectiveness / KPA	Question	Criteria / KPI	Justification
1. Policy	Do we have co-operative governance provisions provided for in South African legislation and guidelines for cooperative governance within the government department?	• Check whether these provisions are effective by: ○ Assessing if co-ordination between environmental authorities has supported the mandate of South African legislation. • Institutional readiness (In your opinion are institution ready to engage in these agreements) • Check at what level these agreements are concluded	Du Plessis, 2008; Muller, 2008

The dimension of effectiveness / KPA	Question	Criteria / KPI	Justification
2. Practice	What are the mechanisms and practices currently developed to evaluate the requirements of co-operative governance provisions put in place?	- Assess the relationship between the actors, in their quest to fulfil the objectives of the agreement (<i>"The extent of interdependence between the different entities making up the network, in so far as this influences styles of interaction and relationships"</i>) - Identification of mechanisms, systems and processes used to comply with the agreement - Are stakeholders cooperative towards the implementation of agreements - Identify if human resources are sufficient and capacitated	Muller, 2008; Steenkamp, 2009; Torfing, 2012.
3. Performance	To what extent, do the objectives of the agreement being met?	- Assess if the intended objectives of the agreements are met. - Assess the perceptions on output, outcome, and ultimate outcome of agreements and impact on the supporting legislation; and	Du Plessis, 2008; Torfing, 2012

The dimension of effectiveness / KPA	Question	Criteria / KPI	Justification
		Assess the perception whether the agreement measures lead to positive outcomes.	
	How effective is environmental governance structures?	- Assess the governance structure; the authority and decision making process. - Assess the roles and responsibilities of stakeholders and the review and amendments dates of the agreement. - Assess information management systems used (i.e., through regular communications, and consultative processes). - Assess the design structure of the agreement (Any flaw, assess time-frames, and whether is the agreement legally binding). - Redundancy, Incoherence, and Lacunae (Assess if there is any evidence of duplication of work, conflicts as a result of different goals and requirements by stakeholders and any failures by	Muller, 2008; Torfing, 2012

The dimension of effectiveness / KPA	Question	Criteria / KPI	Justification
		stakeholders to perform their allocated tasks).	

4.5 Conclusion

The following conclusions could be drawn from the above review:

- There are tools and mechanisms that are developed and coordinated to enhance environmental governance. Legislative structures are developed to facilitate coordinated decision making on environmental issues, but due to the fragmented nature of environmental systems government department does not always cooperate with the initiated cooperative environmental agreements.
- Cooperative environmental governance agreements are meant to address problems associated with fragmented environmental authorizations, but unnecessary bureaucracy is said to be the main challenge facing the current environmental governance efforts locally and internationally, which affects service delivery by government officials.
- Motivations are key drivers for adopting cooperative governance agreement. The adoption of the directives that aim to integrate the environmental authorisation process will improve the current situation in South Africa. The development of these agreements will also allow stakeholders to successfully manage the environment, resolve the multiplicity of legislations, and address the capacity and incompetence of officials, which will resolve the quality of environmental authorizations.
- The challenges to the cooperative environmental agreements are related to the poorly implementations and execution of policies and agreements. The objectives of these agreements are not met due to political interference and lack of sufficient resources.

CHAPTER 5: RESEARCH FINDINGS

5.1 Introduction

This chapter reviews the results and analyses the qualitative data collected, and the findings of the review are presented following the research objectives raised in Chapter 1. Research objectives 1 and 2 were mainly addressed through the literature review section, which is Chapter 3 and Chapter 4. Research objective 2 developed a framework to assess the effectiveness of MoA practice, which is adopted to evaluate the performance of MoA on Eskom's Ash Disposal facilities. Results of research objectives 3 are now dealt with in this chapter. The research findings are derived from analysis of interview transcripts (see **Annexure A**) and from analysing the content of Environmental Authorisations issued for Ash Disposal Facilities (ADFs). To answer research objective 3, the framework's KPA's and its criteria or KPI's from **Table 4.3** above are followed.

5.2 Policy: Do we have co-operative governance provisions provided for in South African legislation and guidelines for cooperative governance within the government department?

In response to the question above, the literature indicated that there are legislative provisions aimed at improving working relations between all spheres of government. It continues to demonstrate that the legal framework required to ensure that duplication and unnecessary delays in the issuance of multiple environmental authorisations is already in place.

These findings are aligned to the content analysis, as presented by CEG, which paints a picture that co-operative governance in South Africa is well documented and understood. Due to the significant importance of cooperative governance in the environmental fraternity, environmental legislation had to find ways to include the co-operative governance concept to its structures. This is supported by primary data, which indicated that environmental legislation motivated the adoption of MoA. Which highlighted the historical adoption of co-operative governance, which dates as far back as 1996, during the promulgation of the Constitution.

These historical developments on co-operative governance were also seen through waste management, which was confirmed by Respondent L1, who stated that

...the current South African legislation makes provision for co-operative governance. Historically the challenge with waste management was that it was seen as a health issue; that is the reason it was managed by the Department of Health. The function was later delegated to the DWAF because it was impacting the environment and public health, mainly through water resources. DWAF employed control systems to regulate waste management through Section 20 of the Environment Conservation Act, ECA. In the process of transforming environmental legislation in South Africa, the debate emanated between Ministers of DWAF and the Department of Environmental Affairs and Tourism

(DEAT) on Integrated Pollution Control and Waste Management. The Ministers decided to manage the environmental impacts from waste disposal sites in an integrated manner, which resulted in the function being moved to the DEA; then, we saw the promulgation of the NEMWA and this Act listed waste management activities that should be licenced under Waste Management Licence (WML). The promulgation of NEMWA then included Sections highlighting co-operative governance in waste management licence applications, which required a RoD from DWS before the issuance of the WML. This working relationship resulted in DEA and DWS signing a Memorandum of Agreement (MoA) regarding disposal site authorisation, where this MoA aims to streamline administrative process, provide and outlines the roles and responsibilities between DEA and DWS on waste disposal sites authorisations, mainly to improve their working relations and eliminate duplication of work during multiple environmental authorisations.

The original decision to adopt co-operative governance in managing the environment was based on an integrated manner of environmental management of activities and the environment as a medium. According to Respondent C1,

When managing waste facilities, DEA and DWS had to decide whether to manage this integration through systems (i.e., MoA, MoU, or through communications) or the integration of functions (i.e., corporate or merge departments). She reported that the combination of departments into one Ministry was tried and failed because it was only merged at the Ministerial level. The operational functions were not integrated due to power struggles on the reporting lines of the officials of the two departments. Due to all failures to merge, they then opted for systems such as a MoA.

Furthermore, Respondent L1 continues to state that the decision to adopt the MoA was, seemingly, influenced more by integrating environmental management:

When managing environment, we should consider, source (i.e., waste facility), resource (i.e., air, water, soil) and remediation of impacts (i.e., through NEMWA). All three aspects should be looked at when managing the environment, and when managing the resource, we should manage air, water, and soil in an integrated manner.

Even though most studies have shown that mechanisms on co-operative agreements are in place, government departments still do not always cooperate with the requirements of those agreements (Kotzé, 2007). According to Du Plessis (2008), these challenges have resulted in newly-developed legally binding initiatives such as MoA regarding waste disposal sites authorisations. However, the literature questioned this MoA's effect by highlighting that its objectives are not met because they are concluded at a high political level without buy-in and a clear understanding from officials on the ground (Du Plessis, 2008). The literature was further supported by Respondent S1 and Respondent N1, who state,

Due to the fact that the MoA should address the operational issues, it was supposed to be signed at Chief Directors/Directors levels. Unfortunately, the agreement was agreed at Director-General level, which created a misalignment in understanding of this MoA between senior and junior officials of the departments. This is creating a problem in trying to meet the overall objectives of cooperative governance and MoA, which is to minimise issues of government department working at cross purposes by ensuring proper alignment....taking away aspects of functional confusions.....clear understanding of roles and responsibilities.....managing and allocating resources to avoid double-dipping.....mainly to prevent the duplication of work.

The above would generate clarity of purpose that would, in turn, inform the appropriate utilisation of resources for effective service delivery on environmental authorisations (Maluleke, 2015). Without understanding and meeting the objectives of cooperative governance and MoA, government departments will continue to work at cross-purpose as there would not be any coordination and alignment of activities (Maluleke, 2015). Literature continues to emphasise that co-operative governance is a good strategy to succeed in environmental fragmentation, and government departments will want to sign a MoA to overcome environmental challenges (Kotzé, 2012). But according to Respondent S1, N1, M1, W1, and O1, MoA;

Is just a ceremonial paper exercise between Ministries....worse some current Senior Officials are not aware of this agreement....the two departments will continue to operate in silos due to bureaucracy and power struggles of officials....the communication between the departments is currently based on personal relationships....we are not accountable to anyone on the deliverables of the MoA....this agreement is not in any way addressing environmental challenges....the mandate of waste is now with DEA....DEA should appoint relevant resources for WML....then DWS should focus on authorising water uses as per Section 21 of NWA....because this MoA is not legally binding as supposed to....it is just there to remind officials; to do their work.

After all the challenges above the literature motivates that to see the benefits of co-operative governance, the South African government should adopt the integrated environmental governance practices based on the Integrated Pollution Prevention and Control Directive 1996, (IPPC Directive) (Kotzé, 2005). The directive aims to integrate environmental authorisation processes, and it is legally binding (Kotzé, 2005). But respondent S1 expressed doubt, by indicating that

In the South African context directives are used to enforce environmental law to non-governmental environmental authorisation holders....this will not work from government to government....currently the South African government established Department of Planning Monitoring and Evaluations (DPME), to assess the performance of each department....the non-performance to the MoA was escalated to DPME....unfortunately they were unable to propose solutions....but requested DEA and DWS to propose solutions as Ministries who

understand the subject better....he continued to suggest that, the only way to integrate authorisation is through establishment of an independent environmental regulatory body.

The findings in this section derived from the framework's criteria or KPI's suggest the following:

Check whether these provisions are effective: The results indicate that the historical development of co-operative governance was also seen in waste management in South Africa. The respondents indicated that for DEA and DWS to be compliant with the requirements of co-operative governance, they had to align their functions and practices. DEA and DWS developed Memorandum of Agreement (MoA) on waste disposal authorisation to integrate their services and improve their working relations, i.e., in support of co-operative governance and provisions provided for in South African legislation. The respondents also indicated that the adoption and implementation of MoA are driven by both provisions in the South African legislation and the integrated nature of the environmental medium.

Institutional readiness: The results indicated that due to the bureaucracy and power struggles of officials, the department would continue to operate in silos. Respondents also indicated that DEA and DWS were previously merged. However, the process was not successful because they were only joined at the ministerial level and neglected the operation functions. The results indicated that water-related functions should remain with DWS while waste should be with DEA. These suggest that even when the respondents are confident that environmental media should be managed in an integrated manner, the institutions are not ready to engage in these agreements.

All respondents indicated that the institutions will not be ready to implement the MoA until they are committed, take ownership, be dedicated, and take responsibility towards the implementation of MoA on waste management. Subsequent to a lack of commitment and responsibility, some respondents have a negative perception of the MoA and feel that it should be cancelled. This view was expressed by a number of respondents including Respondent N1 who stated,

Senior officials of departments are not aware of this agreement, for example, when stakeholders complain about turnaround time of RoDs they think about WULAs, after that they establish committees to fast-track WULA's, which makes you think that you are contracted on something that is not recognised by the department.

Some respondents view the MoA as a waste of time as indicated by Respondent O1,

MoA is not meeting its intended objectives on the issuance of multiple environmental authorizations. Note that to date DWS haven't dispense in terms of Section 22(3) of NWA, which states; "a responsible authority may dispense with the requirement for a licence for water use if it is satisfied that the grant of a licence will meet the purpose of this Act, permit or other authorisation under any other law"....which is allowed under Section 5.4 of MoA....which simply means that to date DWS is not comfortable or satisfied that WML will or can adequately protect water resources. With this current situation, stakeholders will continue to apply for multiple environmental authorisations for the same activities.

Check at what level these agreements are concluded: The respondent indicated that, because the MoA should address the operational issues, it should be signed by the Chief Directors/Directors not at Director-General level as it is currently. The currently followed process was highlighted as the main problem in trying to meet the overall objectives of cooperative governance and MoA at the operational level. The results continue to indicate that Senior government Officials is not aware of such agreements.

5.3 Practices: What are the mechanisms and practices currently developed to evaluate the requirements of co-operative governance provisions put in place?

The research data from the interviewees showed that MoA as a co-operative governance tool is understood as *“a working arrangement, shared responsibility, co-ordination of environmental authorisation activities”* between government departments. The following sub-sections present the identified mechanisms used to comply with the agreements.

5.3.1 Relationship between actors

The relationship between various South African government departments is constitutionally defined as *“showing co-operation with one another in mutual trust, assisting, supporting, and consulting one another coordinating activities and adhering to agreed procedures.”* However, the expressed relationships of government departments are not always in line with the Constitution, thus creating an impression of paradox relationships. The results showed how government departments relate to each other towards the implementation of agreements that will critically impact the quality of environmental authorisation and service delivery.

Most respondents agree on the concept of MoA to be a contractual relationship, subject to communication. The research data reveals that one of the mechanisms that should be improved to effect the agreement is the communication between actors, as articulated by Respondent W1,

“The relationship between DEA and DWS on WML is broken and will not work because of interdependence between the government's entities. But implementing systems such as MoA should influence the likelihood of producing effective coordination.”

Respondent O1, however, argued that *“interdependency is not the issue, because DEA's integrated environmental authorisation is still not effective due to their internal relationships.”* While Respondent S1 recommended that effective coordination could be relatively achieved by *“firstly focusing on effective strategic integration of government departments.”*

5.3.2 Mechanism, systems and processes

It is the expectation of co-operative governance and its tools that spheres of government should cooperate and collaborate with each other in order to improve service delivery (Maluleke, 2015). This, in turn, means that for the MoA to be active and perform its function there should be systems and processes in place.

Thus, the MoA will be useful and will meet its intended objectives. The MoA regarding Disposal Site Authorisation in terms of Section 20 of the Environment Conservation Act, 1998 (Act 73 of 1989), outlines systems that should be developed. Condition 5.1.4 of the MoA, states that DEAT shall “*maintain a database of applications and permit issued and provide electronic access to DWAF.*” The Respondents from both DEA and DWS confirmed that: “*Each department has its own excel spreadsheet, managed by their officials. The spreadsheets are not shared between the two departments.*”

The literature continues to emphasise that the structure of this environmental co-operative agreement is formal and legally binding (Surbhi, 2014). The agreement should consist of the following elements: measures to resolve non-compliance with the agreement, mechanisms and procedures, a record of the delegations, information sharing systems, and coordination of responses to incidents (South Africa, 2008c). Even though the literature gives guidance to the requirements of effective agreements. Government departments sign this agreement without implementing mechanisms to effect the agreements. Respondent M1, confirmed,

The only guideline that was developed was to help applicants to comply with the requirements of DWS, i.e., a checklist on the requirements of RoD. But this information should be circulated to applicants by DEA.

In contrast to the above, both Respondent S1 and W1, highlight the fact that

You can have all the required documents to effect MoA, but if you do not have a relationship, monthly meetings, or a committee to assess the performance of the MoA, we will not win.”

It is important to remember that the concept of MoA promotes shared responsibilities, and this will not be achieved while working in silos.

5.3.3 Stakeholders involvement

The fundamental reasons to engage in these agreements is to improve communication with all stakeholders and self-regulatory systems on environmental issues (Gebers, 1998). Kotzé (2012) continues to state that in a democratic state, we should allow stakeholders to be involved in authorisation processes to help with environmental fragmentation and capacity constraints during the authorization processes. These were supported by both Respondent T1 and B1, who state:

The authorities are not capacitated to execute or make decisions on some of the functions, such as engineering designs, and water-related studies....working together and developing a relationship with stakeholders to draft and conduct studies, using their professional resources, will help eliminate authorisation challenges and improve environmental compliance.

5.3.4 Human resources and capacity constraints

The literature emphasises the fact that the main challenge resulting in objectives of the MoA not met is due to skills shortage and incompetence of officials (Du Plessis, 2008). This notion was supported by Respondent S1 and N1, in that,

DWS National is required to give comments or issue RoDs to all the waste management facilities in South Africa....DWS receives applications from DEA National Office, Provincial Offices and also from Department of Minerals and Resources (DMR)....all these applications are administered by only four officials, and only one professional engineer....which makes it impossible to meet the required MoA and environmental authorisation timelines....this issue continues even after the issuance of WML, because DWS resources are expected to evaluate monitoring reports and manage compliance to the RoD conditions.

Also, Respondent N1, M1, and S1 confirm that capacity constraints are the significant challenges in decision making, by saying,

The documents that are submitted by stakeholders....meant to propose the best possible environmental solution to authorities are not assessed, and decisions cannot be made.... because they are not understood.... because decisions on environmental authorisation are based on waste type and footprint, not on a risk-based approach.

All ten respondents highlighted a lack of resources at DWS as a challenge to effectively meet the requirements of the MoA. Specifically, a lack of human resources to issue RoDs within 90 days was highlighted. For example, Respondent N1 as a manager lamented the lack of human resources at his disposal,

We have an agreement that we struggle to meet its timeframes and obligations primarily because we don't have the capacity. The situations become worse when those that you signed agreements with amending authorisation timeframes without consulting or assessing or quantifying available resources (Respondent N1).

The impacts on timeframes are confirmed by the turn-around time of issued authorisation, outlined in Table 5.1 below.

Table 5.1: Integrated Environmental Authorisation issued timeframes

Power Station ADF	Submitted date	Issued date	Authorised timeframes (days)	Actual time taken for Authorisation (days)
Kriel	11 September 2017	30 March 2018	107	201
Kendal	03 December 2014	28 July 2015	107	237
Majuba	20 January 2015	19 August 2015	107	212
Camden	02 February 2015	04 August 2015	107	184
Matimba	25 January 2016	14 July 2016	107	172
Kusile	18 November 2014	15 July 2015	107	240

The results above show that it takes an average of 207 days for an integrated environmental authorisation to be issued, relative to 107 days, which is the authorised timeframe.

Respondent S1, continues to emphasise that with the available human resources, there is a constraint of skills to assess waste management applications. As Respondent N1 indicated,

Stakeholders applications move from one office to the other of the department, with no responses and decisions, because none of our officials are capacitated to assess or make decisions on environmental risk-based applications.

5.4 Performance: To what extent, do the objectives of the agreement being met?

5.4.1 Objectives of the agreement

The main objectives of the MoA are as follows (South Africa, 2008b):

- *“Integrate the disposal site procedure, resulting in one authorisation containing both parties’ requirements.”*
- *“Establish processes and procedures to be followed between the parties in issuing permits.”*
- *“Establish a streamlined and clear administrative process that correctly allocates roles and responsibilities.”*
- *“Eliminate duplication of work and improve service delivery.”*

The results indicated that the environmental authorisation is only integrated within DEA. DEA issues integrated environmental authorisation (IEA) for activities that required both environmental impact assessment (EIA) and waste management licence (WML). The IEA includes water-related conditions issued through the record of decision (RoD) from DWS. The challenge remains that DWS still grants the water use licence containing the same conditions as outlined in the IEA. The results indicate that the lack

of integrated systems results in duplication of work and unhappy licence holders, and the next section emphasises this.

5.4.2 Perceptions on outputs/outcomes of the agreement

When the effectiveness of agreements is assessed, the analyst should identify a set of measuring instruments. The instruments should measure the inputs and outputs of the agreement. The defined inputs to effect the MoA were determined to be the application documents. The applicants draft environmental impacts reports, water-related studies, and civil design drawings, which were found to be according to the guidelines. The authorities developed guidelines that outline the required information during the application. Respondent B1 also emphasised these,

The WML and EIA requirements are well documented and clear to the applicants....and recently the authorities issued a guideline to help applicants to comply with all the required information by DWS.

Even though the submitted applications are of the required standard, the outputs, which are the environmental authorisations, do not meet the said objectives of the MoA. The duplication is experienced on conditions of integrated environmental authorisation and the WUL issued for the same application. Examples include conditions like the following:

- Construction of the facility
- Operation of the facility
- Water quality management
- Monitoring
- Groundwater quality monitoring and
- Reporting,

The above set of conditions is found in both the IEA and WUL, and this was found to be a reporting nightmare to the licence holder. The view was expressed by Respondent D1, who indicated that

...stakeholders are expected to comply, to the same conditions by reporting the same information, with different authorities.

Respondent B1 shared the same view stating,

During the internal and external audits, we are expected to audit the same conditions twice, to satisfy the requirements of two different legislations.

It is evident from the results above that even if the inputs to the system is addressed it does not mean the output will meet the set objectives. Generally, the data showed that MoA performance should be evidenced by the quality, turnaround time of issued environmental authorisations and meet the set objectives.

5.4.3 Governance structure

Lastly, when the effectiveness of agreements is assessed, the governance structures also need to be evaluated. According to literature, agreements should employ structures that enhance environmental governance. These structures should be used to facilitate joint, co-ordinated decision-making on environmental management and help meet the objectives set for the agreements.

The structural assessment of co-operative management was assessed through the following criteria:

Position and boundary: The application procedure structure and roles and responsibilities are documented and understood. The challenge becomes with the administration of the MoA, in that the agreement is not managed by any committee or meetings. The results indicate that the signatories of the agreement are not coordinated. This, in turn, means that they do not have authority and conflict/decision making structures.

Information and knowledge management: Currently, the data indicate that, due to the absence of any formal structure to manage the MoA, information on applications is handled in excel spreadsheets by different departments. Surprisingly, on the inception of MoA, monthly meetings were held, and there was a shared electronic database to manage applications. This was quoted by Respondent L1,

In 2005, the DEA/DWS developed an electronic data management system (EDMS) to track and register applications and also had monthly meetings to reduce a backlog of applications.

The design of the agreement: Unlike the MoUs, MoAs should be legally binding. According to condition 7 (Dispute resolution) of the MoA, members of the agreement should resolve their dispute or unhappiness with each other following Section 17-22 of NEMA and Section 41 of Intergovernmental Relations Framework act (Act 13 of 2005), which states that “government departments should, in good faith, make every reasonable effort to settle their disputes internally through a facilitator other than judicial proceedings.” Respondent C1 confirmed this understanding,

Government departments will not take each other to court; that is the reason the President established the President’s Coordinating Council (PCC) at the National level, mainly to coordinate the work of all spheres of government.

Redundancy, incoherence, and lacunae: It was found that the impact on co-operative arrangements for integrated environmental management is due to overlapping legal mandates, as well as the newly initiated legislative amendments that are not communicated or not in line with the requirements of other environmental legislations.

The main reason for limited achievement to the expected goals in terms of MoA objectives, where highlight by all ten respondent, as presented in Table 5.2:

Table 5.2: Challenges associated with the implementation of MoA

Respondent	Main challenge
Respondent C1	<i>"The two departments have the same legal status; that is the reason why authorisation exemptions are not issued."</i>
Respondent L1	<i>"Even though there is a dispensing clause in Section 22(3) of NWA, we still deal with dual system, i.e., in general, the applicant must still approach both DEA and DWS for environmental authorisations, even in the presence of MoA."</i>
Respondent N1	<i>"The implementation of MoA will not work due to current bureaucracy at the government department and power politics."</i>
Respondent M1	<i>"MoA is supposed to integrate environmental authorisation, streamlining administrative process and eliminate duplication of work by government departments but continue to see DWS issuing Section 21(g) licences for the activities....as a results to that the WUL section 21(g) conditions are the same as those outlined in the WML....which is not surprising because the conditions on RoD and those of WUL are issued by the same officials at DWS national office."</i>
Respondent W1	<i>"Without dedicated resources such as professional engineer, groundwater, and surface hydrologist, working on WML, the MoA will remain a nightmare."</i>
Respondent S1	<i>"The MoA is outdated it was drafted and concluded under ECA, and now ECA is completely repealed, and it is replaced by NEMWA, the MoA should be amended to reflect the current waste management dispensation....this is supported by Condition 9.3. of the MoA; that the agreement should be revisited once the NEMWA is promulgated."</i>
Respondent O1	<i>"An MoA is just an additional tool to tell people to do what they are contracted to do at their respective work environment, experience has shown that we sign MoA's and when stakeholders start to do their work, MoA's and its continues engagements become unnecessary."</i>
Respondent T1	<i>"The MoA is poorly constructed; how do you have an agreement without review dates, an agreement that is not legally binding and lacking accountability."</i>
Respondent B1	<i>"The RoD that is not issued in the stipulated timeframes of MoA is impacting the deliverables of project timelines, subsequence to that stakeholders are accumulating standing time construction costs."</i>

Respondent	Main challenge
Respondent D1	<i>“The main challenge is based on authorities not willing to engage with the stakeholders and not being transparent; stakeholders are advised not to be involved in authorities processes; the only information you are entitled as stakeholders is the status of your application.”</i>

5.4 Conclusion

The following conclusions could be drawn from the research results:

- The adoption and implementation of Memorandum of Agreement (MoA) on waste disposal authorisation are driven by both provisions in the South African legislation and the integrated nature of the environmental medium.
- The success of the spheres of government with regards to working together towards one common goal is determined by structures and mechanism that are created and relationships within the context of co-operation shared responsibilities and coordination of activities.
- Based on research results, respondent have also maintained that the performance of the MoA on Eskom’s Ash Disposal facilities was found to be ineffective.
- Furthermore respondent highlighted challenges towards the implementation of MoA, which proved that MoA as environmental agreements tool, do not necessarily lead to significant benefits for co-operative governance.

CHAPTER 6: DISCUSSIONS AND CONCLUSIONS

6.1. Introduction

This study focused on Memoranda of Agreement (MoAs), on Waste Disposal Facility (ADF) authorisations, as a tool of co-operative governance, to integrate multiple environmental authorisations, among the Competent Authorities. The Memorandum of Agreement, as a co-operative governance tool, influences how government departments relate to each other to fulfil their functions in the issuance of environmental authorisations. While the study is based on South African authorisation processes, it was mainly concerned with the DEA and the DWS, as the foremost Authorities involved in these processes. Underlying this research was an intention to interrogate its working arrangements and make recommendations for efficiency and effectiveness in the issuance of integrated environmental authorisations. In terms of the applicants, the evaluation focused on the applicability of the MoA provisions on waste disposal authorisation processes on Eskom's Ash Disposal Facilities.

In this chapter, conclusions and recommendations are made, concerning the research objectives. The results were analysed and correlated with the theoretical framework and literature review presented in Chapter 3 and Chapter 4, respectively, to meet the primary research study objective, which was to assess the effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations in South Africa.

6.2. Discussions and analysis of results

The following sections interpret and analyse the research results in Chapter 5.

6.2.1. Policy: Do we have co-operative governance provisions provided for in South African legislation and guidelines for cooperative governance within the government department?

To reiterate, the KPA 1 (Policy), was assessed using the following framework's criteria or KPI's: (i) Check whether provisions provided for in the South African legislation are effective; (ii) Check the institutional readiness to engage in these agreements, lastly, (iii) at what level were these agreements concluded.

The analysis of the results shows that by incorporating co-operative governance agreements within government departments has demonstrated that the South African government has been committed to co-operative governance (South Africa, 1996). This is evidenced by its decision in 1996 to include co-operative governance within the Constitution (South Africa, 1996). The co-operative governance system and its tools, such as MoAs, determine and guide government departments on how they should work in delivering effective service to the Nation.

The analysis of the results continues to show that the principle of co-operative governance, as enshrined in the Constitution, determines the power and authority to government departments, which, in turn, developed policies, legislation, regulations, and strategies in line with this tool (South Africa, 1996). As DEA and DWS have to deliver service in the form of environmental authorisations to the Nation, such services could only be possible, when their working relations were influenced by their constitutional powers. The MoA was developed to improve working relations, to coordinate, and aligning environmental authorisations.

The study found the following as the main drivers for the adoption of co-operative governance agreements:

- The structure of the South African legislation is such that co-operative governance is enforced by the Constitution.
- The environmental policy documents include co-operative governance as one of its concepts.
- The integrated nature of the environmental media.

The study identified that proper management of working relations, power, and authority politics would influence policy and strategy implementations, which, in turn, affects the effective and efficient issuance of integrated environmental authorisations. This management role is critical because, according to the structure of environmental legislation, government departments are expected to work together towards common goals, but there are instances in which they work at cross purposes with each other (Maluleke, 2015). The situation of working at cross purposes as evidenced by the non-alignment of activities during authorisations, confusion, and misunderstanding of each other's legislative requirements.

The findings also suggest that the Constitution declared the government department to be equal, and none is subordinate to each other. Despite all that, it was found that operations of the bureaucracy sometimes demonstrate the contrary. This was evidenced by the fact that DEA could change legislation requirements without consulting DWS because they are the lead environmental authority. Specifically, respondents highlighted that authorisation timeframes are amended without assessing capacity and competency from other government departments.

6.2.2. Practices: What are the mechanisms and practices currently developed to evaluate the requirements of co-operative governance provisions put in place?

The analysis of the results of KPA 2 (Practices), was assessed using the following framework's criteria or KPI's: (i) the relationship between actors in their quest to fulfil the objectives of the agreement; (ii) identify mechanisms, process and systems used to implement the agreement; (iii) stakeholders involvement, and lastly, (iv) looking at the human resources and capacity constraints.

The study indicated that tools for environmental agreements, such as MoA, could only be useful if the relationship between actors, systems, and processes is managed effectively. The relationship between actors on co-operative governance tools is intended to promote good working relations for government departments to deliver quality integrated environmental authorisations (IEA). The main features of this

agreement is that it is supposed to promote a solid partnership between DEA and DWS in the issuance of IEA. In terms of the provision on the agreement, government departments should complement each other, in working together towards a common goal.

The study indicated that it is not possible to enforce relationships, but successful co-operative governance is a product of a healthy relationship based on honesty, respect, and a shared understanding of benefits. Failure of this relationship was shown in cases where government departments working on environmental authorisations hesitate to collaborate because they feel they are being compelled to do things outside their mandate. In those cases, they operate in silos and disregard their Constitutional order on co-operative governance, which has detrimental impacts on the project under development.

The findings re-iterated that the Constitution does not provide for hierarchical relationships between National departments, thus suggesting that systems and processes should manage their relationship to effect environmental agreements. The study, however, observed that systems and processes, which are developed currently, are not in-line with, or supportive of, the requirements of the MoA. This misalignment affects the turnaround time, quality, and achievements of MoA's objective.

The research found that challenges related to structural organisations, e.g., the fact that there is no single department which is superior and lack of clear reporting and accountability structures, are some of the reasons why identified mechanisms are not implemented. This consequence is attributable to the fact that equals do not report or account to each other. Thus, if there is non-compliance to MoA, on the part of one department, there are no consequences and recourse from another department.

The manner in which the DEA and DWS exercise their authority over their respective environmental mandates impacts the country's developments and environmental management, in general. Even though the DEA and DWS signed MoA on Waste Disposal authorisations to adhere to their Constitutional mandate on co-operative governance, their interdependency affects MoA's intended objectives. This, in turn, affects the possibility of issuing an IEA for multiple environmental media.

6.2.4. Performance: To what extent, do the objectives of the agreement being met?

The KPA 3 outlining the performance of MoA examined using the following KPI's: (i) Are set objectives of the MoA met; (ii) perceptions on inputs/output of the agreement, and lastly, (iii) the agreements governance structure.

According to Pradhan et al., (2017), the effectiveness of MoA implementation is determined by understanding the purpose of a MoA. The author Pradhan et al., (2017), continues to emphasise that, proper governance structures lead to good practices, and the success of the MoA implementation depends on those developed structures (Pradhan et al., 2017).

The results indicates the performance of an MoA is important to the environmental fraternity and stakeholders. The success of an MoA is entirely dependent on these two government entities to work

towards a common purpose. The departments need to share best practices on their authorisation structures and learn from each other. Such horizontal co-operative governance structures will reinforce successful best practices on their authorisation structures, identify the need for capacity, and improve performance in compliance with the objectives of MoA. However, the study showed that the application documents submitted for environmental authorisation were developed according to EA, WUL, and RoD requirements guidelines. The challenge lay in duplication of conditions in the environmental authorisations. This duplication does not reflect a streamlined process and creates non-compliance to the objectives of the MoA. The study indicated that duplication of work could only be avoided through working towards a common goal. It was emphasised that this could only be achieved through the development of an independent environmental regulatory body. It is anticipated that this regulatory body would oversee the necessary integration and avoid duplication of work by environmental authorities, which may have a positive spin-off for the country by creating an enabling environmental regulatory environment that is attractive to investors.

The DEA and DWS are managed differently, with each having exclusive powers and authorities to determine their appropriate legislation. As a result, cooperation through MoA on environmental authorisations will require working and functional structures. The ungovernable structure poses a risk on effective and efficient issuance of environmental authorisations because of duplications and confusion to environmental authorisation holders. Thus, on the other hand, it is critical to establish, intergovernmental working committee, because the working committee would lead to:

- Effective tracking of applications,
- Understanding and identifying capacity challenges,
- Improve overall resource utilization within the DEA and DWS,
- Improve understanding of a MoA, and commitment from officials
- Quicker project completion and improved stakeholder's financial statement (Du Plessis, 2008).

It is essential to assess the performance of a MoA because the feedback from the concerned will lead to adjustments that improve the achievement of objectives for future MoA applications. Evaluating the effectiveness of MoA implementation helps raise essential questions such as *“Is the MoA working? What needs to be improved? What could be the feedback mechanism in the MoA?”*(Pradhan et al., 2017).

This, in turn, emphasises the need for an indication of timeframes on agreements. The performance measure of MoA should be related to a specific timeframe. The MoA as a working document should have review dates, to cater for any changes such as legislative amendments. Furthermore, the MoA structure should incorporate incentives; the success of MoA implementation depends on appropriate incentives such as recognizing excellence through departmental manager's awards.

6.3. Conclusion

This section provides the conclusions on the research objectives of the study, namely:

- **Research objective 1:** Study the effectiveness of co-operative governance and the measures provided for in South African legislation.
- **Research objective 2:** Develop the framework to evaluate the effectiveness of the MoA practices regarding Disposal Site Authorisation in South Africa.
- **Research objective 3:** Evaluate the performance of the MoA on Eskom's Ash Disposal facilities.

6.3.1 Research objective 1: Study the effectiveness of co-operative governance and the measures provided for in South African legislation.

Chapter 3 illustrates that there are legislative provisions aimed at improving working relations between all spheres of government. It continues to demonstrate that the legislation provides that the responsible authorities will take responsibility for the required authorisations, and must, therefore, take responsibility for integration and alignment. All this illustrates that the legal framework necessary to ensure that duplication and unnecessary delays in the issuance of multiple environmental authorisations is already in place. Furthermore, the findings in the research study suggest that; the adoption and implementation of Memorandum of Agreement (MoA) on waste disposal authorisation are driven by both provisions in the South African legislation and the integrated nature of the environmental medium.

6.3.2 Research objective 2: Develop the framework to evaluate the effectiveness of the MoA practices regarding Disposal Site Authorisation in South Africa.

The framework was developed in Chapter 4 and used as a basis to evaluate research objective 3. The developed framework used KPA's and KPI's to assess the performance of the MoA on Eskom Ash Disposal facilities. The results of the research study show that the developed framework was effective in analysing the effectiveness of the MoA.

6.3.3 Research objective 3: Evaluate the performance of the MoA on Eskom's Ash Disposal facilities.

Qualitative interviews guided by the developed framework were used to evaluate the performance of the MoA on Eskom's Ash Disposal facilities, i.e., to answer the main objective of the research study, namely, "How effective are co-operative governance agreements when dealing with multiple environmental authorisations in South Africa?" The results of the research study suggest the limited effectiveness of MoAs as a co-operative governance agreement tool in achieving expected MoA objectives. It must be noted, though, that the research study was restricted to MoA on waste disposal authorisation between DEA and DWS on Eskom ADFs only, and the following conclusions are formulated based on the research findings:

It is clear that the main reason for limited achievement on objectives of MoA as a co-operative governance agreement tool is related to the symbolic implementation and enforced implementation of a MoA by the DEA and DWS (i.e., lack of substantive implementation). Evidence indicates that despite all the legislative requirements on co-operative governance, the application of MoA's requirements seems to lack operational resources. The implementation challenge is attributed to several issues identified by the respondents, including:

- Lack of commitment and responsibilities by DEA and DWS officials.
- Lack of human resources to implement the requirements and objectives of the agreement.
- Lack of integration of environmental legislative requirements and MoA's objectives into business practice, and
- Poorly designed MoA, which is not in-line with the current legislation.

Furthermore, the MoA implementation challenges could also be attributed to misalignments on the intended objectives of MoA between senior and junior officials of government departments. These misalignments have compromised compliance with environmental legislation and impacted negatively on Eskom's ADF construction timelines.

6.4. Recommendations

The research study used a small but representative sample of environmental officials and specialists. This study, however, presented evidence which should assist government departments in enhancing the effectiveness of co-operative governance agreements. Based on the research findings, the study makes the following recommendations:

- The South African government should standardise, legalise, and enforce signed agreements between government departments to see potential benefits in environmental authorisations.
- The South African government should establish inter-governmental coordination mechanisms to evaluate the effectiveness of co-operative governance agreements.
- The South African government should establish external co-operative governance agreements controls (external stakeholders), to assess the performance of government environmental regulatory instruments.
- Lastly, there is a need to integrate the decision-making on policy developments and updates, to improve working relations and understanding of human resources required to implement the legislation.

6.4.1. Recommendations for further studies

Based on this study's findings, I would like to recommend that:

- The research study should be extended to determine the effect of environmental co-operative governance agreements on project proponents.
- The research study should be extended by comparing environmental co-operative governance agreements, and the Integrated Pollution Prevention and Control Directive as tools to integrate environmental authorisation.
- The research study could also be expanded to other waste management facilities to test other waste facility's effects on MoA.

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ANNEXURES A: INTERVIEW SCHEDULE

Company/Department	Involvement	Interviewee	Date of interview
Department of water and sanitation (DWS)	Director: Responsible on policy development and implementation i.e., on water resources and waste management.	Anonymous	26 August 2019
	Assistant Director: Responsible for waste management licencing	Anonymous	22 August 2019
	Assistant Director: Responsible for auditing water use licences and waste management licences.	Anonymous	20 August 2019
Department of environment, forestry and fisheries (DEFF)	Chief Director: Responsible for environmental authorisations	Anonymous	29 August 2019
	Director: Responsible for environmental impact assessment.	Anonymous	27 August 2019
Eskom Holdings SOC Ltd (Sustainability Division: Environmental)	Middle Manager: Responsible for environmental impact assessments and waste management licences.	Anonymous	30 August 2019
	Senior Environmental Advisor: Responsible for waste management licences and environmental impact assessments.	Anonymous	30 August 2019
	Senior Environmental Advisor: Responsible for water resources management and water use licences.	Anonymous	19 August 2019
Environmental Consultant	Consultant (Former DWS Director): responsible for Water Use Licences and Waste Management Licences applications.	Anonymous	18 September 2019
	Consultant (Former DWS and DEFF Director): Responsible for waste management licence applications.	Anonymous	27 August 2019

Interview questions

Section A: Do we have co-operative governance provisions provided for in South African legislation and guidelines for cooperative governance within the government department? Moreover, what motivated DEA and DWS to adopt co-operative governance agreements?

- Why did DEA and DWS decide to sign co-operative governance agreements (i.e., MoA in the issuance of waste licence)?
- What are the main drivers to adopt or sign co-operative governance agreements?
- Were there any pressures or motivations that drove DEA and DWS to sign co-operative governance agreements?
- Do we have provisions for co-operative governance in South African legislation?
- Did the coordination between DEA and DWS support the mandate of South African Legislation?
- At what level are these agreements signed? Political, senior officials, etc.
- Do you think these organisations are ready to engage in these agreements?
- Are there any other initiatives that can be used to integrate environmental authorisation, eliminate duplication of work during environmental authorizations

Section B: What are the mechanisms and practices currently developed to evaluate the requirements of co-operative governance provisions put in place?

- Are there mechanisms that are used to comply with the requirements of the agreement? What are instruments that are used to adhere to the agreement (Guidelines, protocols, procedures, and ToR)?
- Is there performance indicators developed for the environmental agreements on cooperative governance?
- Are there any incentives/ consequences/ accountability?
- How is the relationship between DEA and DWS on the agreement? How often do you meet to discuss or assess the progress on environmental authorizations and review the processes and objectives of the agreement?
- Are stakeholders involved and cooperative towards the implementation of the agreements?
- Do we have sufficient human resources? And are they capacitated to implement the requirements of the agreements?
- What are some of the key benefits that were experienced as a result of implementing co-operative governance agreements in the issuance of waste licences (i.e., in the case of Ash disposal facilities)?
- Will the involvement of stakeholders on co-operative governance agreements derive any benefits?

Interview questions

- Has the implementation of co-operative governance agreements had an impact on the quality of environmental authorization? Please elaborate and provide some concrete examples.

Section C: Performance: To what extent do the objectives of the agreement being met? Also, are there challenges that are experienced to achieve the MoA objectives?

- In your opinion, are the output and outcomes of these agreements effective and support the legislation?
- Are the current measures (if any) effective and lead to a positive outcome?
- Are the set objectives of the environmental agreements on cooperative governance met?
- How effective is the environmental governance structure in implementing environmental agreements on cooperative governance:
- How is the structure and authorization process (who is involved)?
- Who makes decisions of authorization? How do we exchange information? Who resolves conflicts or deference's (if any)?
- Are the boundaries demarcated? The role players and their roles, time frames to respond. Is there any review date of the agreement or time frames to resign from the agreement?
- How do we manage information from role players? Shared database, monthly meetings, or electronic networks.
- Are there any flaws in this agreement?
- Is there any evidence of duplication of work, conflicts as a result of deferent goals and requirements by stakeholders?
- Any failures by stakeholders to perform their tasks?

Challenges of environmental agreements on cooperative governance

- What are some of the challenges or difficulties that are experienced in implementing environmental agreements on co-operative governance?
- What are some of the pitfalls associated with the implementation of environmental agreements on cooperative governance?
- What are the challenges experienced by applicants during and after the issuance of environmental authorizations?
- What are some of the actions put in place to mitigate against the challenges, difficulties, and pitfalls you have mentioned?
- In your opinion, what are the main reason for the lack of co-operative governance even in the presence of agreements?

ANNEXURES B: ETHICAL CLEARANCE

Ethical clearance letters



To: Whom it may concern

Date:
01 July 2019

Enquiries: Diedre Herbst
Tel +27 11 800 3501

Ref: ENV19-L144

Dear Sir / Madam

RE: CONSENT TO USE ESKOM DATA FOR ACADEMIC PURPOSES

This letter serves to confirm that I have given Solomon Tshimane Tsheko (4102472), student number (21275807) consent to use Eskom data for the purpose of completing a Master's degree in Environmental Management. This also serves to confirm that the data is to be used for academic purposes.

Yours sincerely

Diedre Herbst

**ESKOM ENVIRONMENTAL MANAGER
RISK AND SUSTAINABILITY DIVISION**

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Environmental Management Department
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Tel +27 11 800 3501 Fax +27 86 661 6092 www.eskom.co.za
Eskom Holdings SOC Limited Reg No 2002/015527/30

Ethical clearance letters



Ms Diedre Herbst:
Senior Manager: Environmental Management
Risk and Sustainability Division
Eskom Holdings SOC Ltd

Ref: ENV19-L143

Date:
01 July 2019

Enquiries: Solomon Tsheko
Tel +27 11 800 2908

Dear Deidre Herbst

REQUEST FOR PERMISSION TO CONDUCT RESEARCH USING ESKOM DATA FOR ACADEMIC PURPOSES.

I am, Solomon Tshimane Tsheko (4102472), a Senior Advisor Environmental Management within the Sustainability Division, Environmental Management Department. I am currently a registered student for Masters in Environmental Management at North-West University (Potchefstroom campus). As part of my studies, I am required to undertake an academic research study. I therefore request written permission to conduct research using Eskom data.

My study will consist of evaluating the effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations in South Africa i.e. Assess the effectiveness of the MoA (Memorandum of Agreement Regarding Disposal Site Authorisation in terms of Section 20 of Environmental Conservation Act, 1998 (Act 73 of 1989)) in the case of Eskom's Ash Disposal facilities (ADF). In order to achieve this objective, I will need to collect data through assessing ADF's integrated environmental authorisations and issued water use licences. I will also need to interview relevant employees within Eskom and Authorities who worked on environmental authorisations of Eskom's ADF.

Kindly note that all research at the North-West University is governed by strict ethical standards and therefore this research is bound by these standards. The administration of the interviews and the environmental authorisation data will thus follow strict ethical guidelines of confidentiality as dictated by the University ethical guidelines. The data and results of the research will be used for academic purposes only.

I hope that this request will meet your favourable consideration.

Yours Faithfully

Solomon T Tsheko

**SENIOR ADVISOR: ENVIRONMENTAL MANAGEMENT
RISK AND SUSTAINABILITY DIVISION**

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ANNEXURES C: LANGUAGE EDITOR CERTIFICATE

Declaration

This is to declare that I, Annette L Pombrink, accredited language editor and translator of the South African Translators' Institute, have language-edited the
mini-dissertation by

ST Tsheko

with the title

The effectiveness of co-operative governance agreements when dealing with multiple environmental authorisations in South Africa



Prof Annette L Pombrink
Accredited translator and language editor
South African Translators' Institute
Membership No. 1000356
Date: 18 November 2019