



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

ADVANCING THE EFFECTIVE IMPLEMENTATION OF THE ONE ENVIRONMENTAL SYSTEM FOR MINING THROUGH COOPERATIVE ENVIRONMENTAL GOVERNANCE

By

Shamila Mpinga (MPNSHA004)

Dissertation submitted to the Faculty of Law, University of Cape Town in fulfilment of the requirements of the degree of Masters of Law

Date of submission: January 2020

Supervisor: Professor Hanri Mostert, DST/ NRF SARChI Research Chair: Mineral Law in Africa

MINERAL LAW
IN AFRICA

✉ mia@uct.ac.za 🌐 www.mia.uct.ac.za



The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

Declaration

1. I know that plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.
2. I have used the footnoting convention for citation and referencing. Each contribution to, and quotation in, this opinion from the work(s) of other people has been attributed, and has been cited and referenced.
3. This opinion is my own work.
4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

Signed by candidate

Advancing the Effective Implementation of the One Environmental System for Mining Through Cooperative Environmental Governance

By

Shamila Mpinga (MPNSHA004)

Dedication

I dedicate this dissertation to my family. To the present and past generations of my family, the struggles that you have endured and the sacrifices you have made have given me the key to success – education. I am beyond grateful.

To my unborn children, I hope that my success acts as a beacon of hope and unlocks many doors for you.

Acknowledgments

I am immensely grateful for the support and motivation during my studies. The writing journey was an edifying experience that taught me more about myself than I could have imagined. I would like to express my appreciation to the following parties who helped me realise this achievement.

To Professor Hanri Mostert, this dissertation would not have been possible without your supervision and guidance. Thank you for pioneering the Mineral Law in Africa Chair, under which this research was conducted. Your contribution to Mineral Law and the development of young professionals, like myself, deserves utmost praise.

This research was made possible by the National Research Foundation. I am grateful for the financial support and mentorship provided by the Mandela Rhodes Foundation. Opinions expressed in this dissertation are my own and should not be attributed to these institutions.

I would like to acknowledge the contributions made by those who developed the literature that inspired this dissertation. I have “seen further” by conducting this research because “I stand on the shoulders of giants.”¹

To my colleagues in the Mineral Law in Africa Writing Circle, I am indebted to you for guiding me throughout the writing process. I owe you cake!

My family and friends have been my pillars of strength. It would be remiss of me not to give a special thanks to the following people for the constant encouragement. To Simon, Ghati, Shirley, Godknows, and Analisa – thank you for motivating me to persevere when I did not think I could. Zainab, Asma and Nonkululeko, thank you for creating a home away from home for me. To Bandile, Zulaika and Naa-Adjekai – your undying support does not go unnoticed. I am a better person because of you. To Arnold, thank you for helping me realise my potential. You have gone beyond the call of duty and I am eternally grateful.

Finally, I owe everything I am to the Almighty.

¹ Sir Isaac Newton in a letter to Robert Hooke in 1675: C Chen *Mapping Scientific Frontiers* (2003) 135.

Abstract

In 2014, the One Environmental System for mining came into effect. This legislative framework was introduced to streamline the environmental regulation of mining activities by consolidating such regulation in the National Environmental Management Act (NEMA). The most significant aspect of the regulatory framework, for purposes of this research, is the allocation of powers to the authorities responsible for implementing the One Environmental System. The authorities tasked with implementing the One Environmental System are the Department of Mineral Resources and Energy (DMRE), the Department of Environment, Forestry and Fisheries (DEFF) and the Department of Human Settlements, Water and Sanitation (DHWS).

In the distribution of power, the DMRE is tasked with enforcing the regulatory framework in the minerals extraction industry. The DEFF sets the regulatory framework and is the appeal authority for decisions taken by the DMRE. Finally, the DHWS is responsible for regulating and enforcing the National Water Act.

Although introducing the One Environmental System has improved the regulation of the environment in relation to mining, its regulation - and, more so, enforcement - has received more criticism than praise. Intragovernmental fragmentation has been cited as a cause of ineffective implementation of the regulatory framework. A lack of cooperation between the departments hampers the objective of streamlining the environmental regulation of mining. Therefore, it is imperative that the authorised departments cooperate with each other to achieve the effective implementation of the One Environmental System for mining.

The aim of this dissertation is to suggest ways to foster cooperation between the DMRE, DEFF and DHWS to achieve the effective implementation of the One Environmental System. This goal is achieved by providing an analysis of the implementation efforts of the three departments. Since the analysis shows that intragovernmental fragmentation has hampered the effective implementation of the regulatory framework, this research provides recommendations to improve the implementation of the One Environmental System.

Table of Contents

Dedication	i
Acknowledgments	ii
Abstract	iii
Table of Figures	viii
Table of Abbreviations	ix
CHAPTER 1: INTRODUCTION	
1 Introduction.....	1
2 Background and Context.....	2
3 Research Question	5
4 Research Method	6
5 Course of Inquiry	6
CHAPTER 2: LEGISLATIVE FRAMEWORK - ONE ENVIRONMENTAL SYSTEM	
1 Introduction.....	8
2 Origins of the One Environmental System	11
3 Key Concepts of the One Environmental System.....	15
3.1 Mining Right and Environmental Management Programmes	15
3.2 Environmental Authorisation.....	16
3.3 Inspectors	18
3.3.1 Environmental Management Inspectors	18
3.3.2 Environmental Mineral Resource Inspectors.....	19
3.3.3 Inspectors’ Concurrent Jurisdiction to Enforce compliance with environmental laws at mines.....	20
4 Regulation and Enforcement of the One Environmental System	23
5 Assessment of the One Environmental System	26
5.1 Mining Investors	27

5.2	Civil Society.....	28
5.3	Provincial and Local Government	32
5.4	Department of Environment, Forestry and Fisheries	33
5.5	Department of Mineral Resources and Energy	34
5.6	Parliament	34
6	Conclusion	37

CHAPTER 3: THEORIES OF COMPLIANCE AND ENFORCEMENT IN RELATION TO THE ONE ENVIRONMENTAL SYSTEM

1	Introduction.....	39
2	Theories of Compliance.....	41
2.1	Rationalist Theory of Compliance: Logic of Consequences	42
2.2	Normative Theory of Compliance: Logic of Appropriateness	44
2.3	Integrating Rationalists and Normative Theories	46
3	Theories of Enforcement.....	47
3.1	Rationalist Theory of Enforcement: Coercive Approach	49
3.2	Normative Theory of Enforcement: Cooperative Approach	50
3.3	Analysing Theories of Enforcement	51
3.3.1	Calls to Reform the Hybrid System by Dismantling the Coercive Approach	52
3.3.2	Arguments for a Hybrid System of Enforcement which Emphasises the Coercive Approach to Enforcement.....	55
3.3.3	Implementing a Hybrid Approach to Enforcement	59
4	Conclusion	61

CHAPTER 4: COMPLIANCE AND ENFORCEMENT MEASURES IN THE ONE ENVIRONMENTAL SYSTEM

1	Introduction.....	63
2	Command-and-control Measures.....	64
2.1	Criminal Measures	65

2.1.1	Fines.....	68
2.1.2	Alternative penalties	69
2.1.3	Corporate-specific penalties.....	70
2.2	Administrative Measures	71
2.2.1	Directives	72
2.2.2	Notices	74
2.2.3	Administrative Penalties	75
3	Alternative Compliance and Enforcement Measures	77
3.1	Voluntary Compliance Measures.....	78
3.1.1	Self-regulatory Measures	79
3.1.2	Co-regulatory Measures.....	82
3.2	Incentive-based Measures	84
3.2.1	Market-based Incentives	84
3.2.2	Regulatory Incentives	88
3.2.3	Information-based Incentives.....	89
4	Conclusion	91
 CHAPTER 5: RECOMMENDATIONS - COOPERATIVE ENVIRONMENTAL GOVERNANCE		
1	Introduction.....	93
2	Cooperative Environmental Governance.....	94
3	Practical Implications of Cooperative Environmental Governance.....	96
4	Conclusion	101
 CHAPTER 6: CONCLUSION		
1	Reflections on the One Environmental System	104
2	Theoretical Approach to Enforcement.....	106
3	Available Enforcement Measures	107
4	Concluding Remarks: Cooperative Environmental Governance.....	110

Bibliography 112

Table of Figures

Figure 1: One Environmental System – authorities and responsibilities10

Figure 2: One Environmental System – transition timeline.....12

Figure 3: Process to be followed when there is a lack of enforcement by mining inspectors.....20

Figure 4: Differences between the rationalist theory and normative theory.....47

Figure 5: Enforcement pyramid.....59

Table of Abbreviations

2008 MPRDAA	Mineral and Petroleum Resources Amendment Act 49 of 2008
2008 NEMAA	National Environmental Management Amendment Act 62 of 2008
2014 NEMLAA	National Environmental Management Laws Amendment Act 25 of 2014
DEFF	Department of Environment, Forestry and Fisheries
DHWS	Department of Housing, Water and Sanitation
DMRE	Department of Mineral Resources and Energy
EIA	Environmental Impact Assessment
EMCA	environmental management cooperation agreements
EMP	Environmental Management Programme
EMS	environmental management system
GDP	Gross Domestic Product
ISO	International Organisation for Standardisation
MEC	Member of Executive Council
MPRDA	Mineral and Petroleum Resources Development Act 28 of 2002
NEMA	National Environmental Management Act 107 of 1998
NPA	National Prosecuting Authority
NWA	National Water Act 36 of 1998
SAB	South African Bureau of Standards
SAMRAD	South African Mineral Resources Administration Database
SAPS	South African Police Services
SEMA	specific environmental management Acts
SPLUMA	Spatial Planning and Land Use Management Act 16 of 2013

REIPPP
Programme

Renewable Energy Independent Power Producer's Procurement

Chapter 1:

Introduction

1 Introduction

In 2014, the One Environmental System for mining came into effect.¹ This regulatory framework was introduced to streamline the environmental regulation of mining activities.² It does this by consolidating the environmental provisions relating to mining in the National Environmental Management Act (NEMA).³ The most significant aspect of the regulatory framework, for purposes of this research, is the allocation of powers to the authorities responsible for implementing the One Environmental System.⁴ The authorities tasked with implementing the One Environmental System are the Department of Mineral Resources and Energy (DMRE), the Department of Environment, Forestry and Fisheries (DEFF) and the Department of Human Settlements, Water and Sanitation (DHWS).⁵

For many years preceding the introduction of the One Environmental System, the mining industry criticised environmental regulation in the context of mining for its duplication of laws and the lengthy periods associated with obtaining environmental authorisations.⁶ In addition, concerns were raised about the various authorisations required under various laws and from a range of government departments.⁷ The One Environmental System promised to improve the

¹ Section 50A of the National Environmental Management Act 107 of 1998 (hereinafter NEMA) & section 63A of the National Water Act 36 of 1998 (hereinafter NWA); T Humby 'One Environmental System: Aligning the Laws on the Environmental Management of Mining in South Africa' (2015) *Journal of Energy and Natural Resources Law* 119.

² South African Human Rights Commission *National Hearings on the Underlying Socio-economic Challenges of Mining-affected Communities in South Africa* (2016) at 43 available at <https://www.sahrc.org.za/home/21/files/SAHRC%20Mining%20communities%20report%20FINAL.pdf> accessed 17 February 2018; Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at XIII available at <https://cer.org.za/news/zero-hour>, accessed 15 March 2018.

³ Section 50A(2)(a) NEMA.

⁴ South African Human Rights Commission *National Hearings* 44; Chapter 2 of this dissertation.

⁵ In June 2019, all three departments were renamed and had their mandates expanded. The DMRE was previously known as the Department of Mineral Resources; the DEFF was previously known as the Department of Environmental Affairs and the DHWS was previously known as the Department of Water and Sanitation; Section 50A NEMA & section 163 NWA.

⁶ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* (2019) unpublished parliamentary document presented at the Colloquium on the One Environmental System convened by the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 20 November 2018 (copy on file with author) 2; South African Human Rights Commission *National Hearings* 43.

⁷ South African Human Rights Commission *National Hearings* 43.

process of obtaining authorisations for mining activities by streamlining the processes between the respective governmental department.⁸ Contrary to that, the regulatory framework created legal uncertainty regarding the allocation of powers between the authorities responsible for implementing the One Environmental System.⁹

The allocation of powers between the departments responsible for the One Environmental System was the subject of contention in *Mineral Sands Resources (Pty) Ltd v Magistrate for the District of Vredendal, Kroutz NO and Others (Mineral Sands Resources)*.¹⁰ This judgment clarifies that the One Environmental System stems from an agreement between the DMRE, DEFF and the DHWS.¹¹ The DMRE is tasked with enforcing the regulatory framework in the minerals extraction industry.¹² The DEFF sets the regulatory framework and is the appeal authority for decisions taken by the DMRE.¹³ Finally, the DHWS is responsible for regulating and enforcing the National Water Act.¹⁴

2 Background and Context

The operation of the One Environmental System is best understood within its background and context as set out below. Various authorisations are required before mining activities can be conducted.¹⁵ In its effort to streamline the environmental regulation of mining, the One Environmental System changed the prerequisites for mining activities, introduced a new enforcement authority and consolidated its provisions in NEMA.¹⁶

To conduct mining activities, an applicant requires a mining right.¹⁷ Before the commencement of the One Environmental System, applicants for mining rights required two environmental management programmes (EMP); one in terms of NEMA and the other in terms of the Mineral and Petroleum Resources Development Act (MPRDA).¹⁸ Applicants for mining rights had to

⁸ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at XIII.

⁹ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 1 – 15; Chapter 2 of this dissertation.

¹⁰ *Mineral Sands Resources (Pty) Ltd v Magistrate for the District of Vredendal, Kroutz NO and Others* [2017] 2 All SA 599 (WCC) para 1 (hereinafter *Mineral Sands Resources v Magistrate*).

¹¹ *Mineral Sands Resources v Magistrate* para 42.

¹² Section 50A(2)(b) NEMA.

¹³ Section 50A(2)(b)-(c) NEMA.

¹⁴ Section 50A(2)(d) NEMA.

¹⁵ Section 24 & 24N NEMA; *Mineral Sands Resources v Magistrate* para 14; Chapter 2, part 3 of this dissertation.

¹⁶ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at XIII.

¹⁷ Section 22 of the Mineral and Petroleum Resources Development Act 28 of 2002 (hereinafter MPRDA).

¹⁸ *Mineral Sands Resources v Magistrate* para 15 – 17.

conduct an Environmental Impact Assessment to produce the MPRDA EMP and the NEMA EMP.¹⁹ To simplify the application process for the mining industry, the coming into effect of the One Environmental System repealed the provision requiring the MPRDA EMP.²⁰ The effect of this pronouncement is that only the NEMA EMP is required from applicants for mining rights.²¹

In addition to the mining right and NEMA EMP, an environmental authorisation is required for certain listed activities.²² Because mining was introduced as a listed activity when the One Environmental System came into effect, an environmental authorisation is required before mining activities are conducted.²³ The DMRE is the authority responsible for issuing environmental authorisations in the context of mining.²⁴ The allocation of this power with the DMRE was not well received by environmental lobby groups for a number of reasons.²⁵ Firstly, the proposed regulatory framework had initially designated the DEFF as the authority for issuing environmental authorisations for mining activities.²⁶ Second, the DEFF remains the authority for issuing environmental authorisations for all industries except mining.²⁷

Notwithstanding that the DMRE is the authority empowered to issue environmental authorisations, the DEFF is the appeal authority for decisions taken by the DMRE.²⁸ To ensure the efficient operation of the One Environmental System, NEMA has laid down a process to be followed by applicants for environmental authorisation who are not satisfied with the DMRE's decisions.²⁹ Where the DMRE has not made a decision regarding an application within the prescribed time-frame, the applicant may apply to the DEFF to consider the application.³⁰ The DEFF Minister may make a decision regarding environmental authorisations

¹⁹ Section 39 (1) of the MPRDA, which has been repealed.

²⁰ Section 12(4) National Environmental Management Amendment Act 62 of 2008.

²¹ Section 12(4) National Environmental Management Amendment Act 62 of 2008; *Mineral Sands Resources v Magistrate* para 30.

²² Section 24 NEMA.

²³ Section 24 NEMA; *Mineral Sands Resources v Magistrate* para 21.

²⁴ Sections 24C(2A) NEMA & section 38A MPRDA.

²⁵ G Ashton 'An Example of the Impacts of Adopting the 'One Environmental System' of Mining Governance: Some Lessons from MRC's Tormin Mine' (2017) *Conversation around Transparency and Accountability in South Africa's Extractive Sector* 17; Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at XIII.

²⁶ Humby (2015) *Journal of Energy and Natural Resources Law* 121; M Diemont, C Pillay & G Rapson 'Environmental regulation of the mining industry' *Lexology* 02 September 2014, available at <https://www.lexology.com/library/detail.aspx?g=dafa2598-0b1b-42c7-9cbf-02aebdd46d5f> accessed 14 August 2017; Chapter 2, part 2 of this dissertation.

²⁷ Section 24C(2) NEMA.

²⁸ Section 50A NEMA & section 163 NWA.

²⁹ Section 24C(2C)(a)(f) NEMA; *Mineral Sands Resources v Magistrate* para 100.

³⁰ Section 24C(2C)(a) NEMA; *Mineral Sands Resources v Magistrate* para 100.

only if the DMRE Minister is consulted and if due processes are followed.³¹ This appeals process gives effect to the cooperative governance dimension of the One Environmental System.³² The concept of cooperative environmental governance is explored in chapter five of this research.³³

Even before the introduction of the One Environmental System, NEMA made provision for environmental management inspectors (environmental inspectors) from the DEFF to enforce the provisions of NEMA.³⁴ The introduction of the One Environmental System saw the establishment of the environmental mineral resource inspectorate (mining inspectors).³⁵ The DMRE, through its mining inspectors, is now empowered as the enforcement authority for environmental laws in the context of mining.³⁶ The DEFF remains the enforcement authority for environmental laws for all industries, except mining.³⁷ Where mining inspectors experience capacity challenges in enforcing NEMA, the DEFF may instruct environmental inspectors to assist with the enforcement of the One Environmental System.³⁸

The focus of this research is on the implementation, that is the regulation and, more so, the enforcement, of the One Environmental System. The DMRE is the enforcement authority while the DEFF is tasked with setting the regulatory framework and managing the appeals against the DMRE's decisions.³⁹ The role of the DHWS is that of regulator and enforcer of the National Water Act.⁴⁰ This research focuses on the intragovernmental fragmentation between the DMRE, DEFF and DHWS in relation to the implementation of the One Environmental System.⁴¹ The aim of this research is to unpack the challenges that plague the implementation of the One Environmental System and to propose solutions to achieve its effective implementation.

³¹ The process is set out in section 24C(2C)(a)-(f) NEMA; *Mineral Sands Resources v Magistrate* para 100.

³² Chapter 5 of this dissertation.

³³ Chapter 5 of this dissertation.

³⁴ Section 31B NEMA.

³⁵ Section 31BB NEMA.

³⁶ Section 31D(2A) NEMA; *Mineral Sands Resources v Magistrate* para 23.

³⁷ Section 24C(2) NEMA.

³⁸ Section 31D(4) NEMA; *Mineral Sands Resources v Magistrate* para 25.

³⁹ Section 50A NEMA & section 163 NWA.

⁴⁰ Section 50A NEMA & section 163 NWA.

⁴¹ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 15.

3 Research Question

The discussion above notes the intragovernmental fragmentation between the DMRE, DEFF and DHWS in implementing the One Environmental System.⁴² A lack of cooperation between the departments hampers the objective of streamlining the environmental regulation of mining.⁴³ Therefore, it is imperative that the authorised departments cooperate with each other to achieve the effective implementation of the One Environmental System for mining.⁴⁴

The aim of this research is to determine how cooperation between the DMRE, DEFF and DHWS can be fostered to achieve the effective implementation of the One Environmental System. This research question translates to the following sub-questions:

1. To what extent have the DMRE, DEFF and DHWS fulfilled their duties under the One Environmental System for mining?
2. How can cooperation between the departments be improved to ensure the effective implementation of the One Environmental System for mining?

These questions are addressed by unpacking the challenges faced by the authorised departments through a discussion and analysis of the regulatory framework.⁴⁵ The regulatory framework aims to streamline the environmental regulation of mining; however, an analysis of the One Environmental System brings its efficacy into question.⁴⁶

Although each of the three departments are experiencing challenges in fulfilling their duties, the focus of this research is on the enforcement challenges experienced by the DMRE.⁴⁷ The DMRE has been the target for much of the criticism against the One Environmental System.⁴⁸ Therefore, this research considers the criticism levelled against the DMRE regarding its duty to enforce the One Environmental System.⁴⁹ Although the focus is on the DMRE, this research also analyses the DEFF and the DHWS's roles in the One Environmental System.⁵⁰

⁴² Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 15.

⁴³ Chapter 2, part 5 of this dissertation.

⁴⁴ Chapter 5 of this dissertation.

⁴⁵ Chapter 2, part 5 of this dissertation.

⁴⁶ Chapter 2, part 5 of this dissertation.

⁴⁷ Chapter 2, part 5 of this dissertation.

⁴⁸ Chapter 2, part 5 of this dissertation.

⁴⁹ Chapter 2, part 5 of this dissertation.

⁵⁰ Chapter 2, part 5 of this dissertation.

Proposing solutions to the challenge of implementing the One Environmental System is an essential part of this research.⁵¹ However, researching this topic was limited by the lack of reporting on the progress of the One Environmental System by the DMRE.⁵² Furthermore, the limited scope of the research does not permit an in-depth discussion of all the available enforcement measures.⁵³ Therefore, the discussion is limited to the enforcement measures that have been effective and those that are likely to improve the implementation of the One Environmental System.⁵⁴

4 Research Method

This is a desktop study that relies primarily on legislation, judicial judgements and academic literature on the One Environmental System. The research provides an analysis of these primary and secondary legal resources to formulate the research question and provide recommendations.

5 Course of Inquiry

This research is divided into six chapter as outlined below.

Chapter 1: Introduction

The first chapter sets out the research question and its relevance for improved governmental cooperation. This introduction discusses the background and context of the One Environmental System. In doing so, the chapter establishes why the intragovernmental fragmentation within the system is a topic that warrants research.

Chapter 2: Regulatory Framework – The One Environmental System

This chapter sets out the regulatory framework of the One Environmental System and provides an analysis of it. It provides a background into the formation of the regulatory framework and discusses the key concepts that are relevant for a discussion of the One Environmental System. The relevant legislation and landmark cases are discussed to establish a foundation for the

⁵¹ Chapter 5 of this dissertation.

⁵² Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* (2019) unpublished parliamentary document presented to the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 19 November 2018 (copy on file with author) 1 – 8.

⁵³ Chapter 4 of this dissertation.

⁵⁴ Chapter 4 & 5 of this dissertation.

research. An assessment of the implementation of the One Environmental System follows, thereby giving context to the research question.

Chapter 3: Theories of Compliance and Enforcement in Relation to the One Environmental System

This chapter provides a theoretical background for the research. It considers the research question and proposes solutions from a theoretical perspective by discussing the rationalist and normative theories of compliance and enforcement. These theories focus on the behavioural motivations that drive compliance. Once the behavioural motivations are determined, effective enforcement measures are formulated to complement the compliance behaviour or lack thereof. This theoretical chapter forms a basis for the discussion of practical enforcement measures in the One Environmental System that follows in chapter four.

Chapter 4: Compliance and Enforcement Measures in the One Environmental System

This chapter discusses the various measures that are available for the enforcement of the One Environmental System. The measures are categorised as either command-and-control measures or alternative compliance measures. This chapter considers under what circumstances each of these measures should be used to secure compliance from regulated persons.

Chapter 5: Recommendations for the Effective Implementation of the One Environmental System

This chapter provides recommendations for the effective implementation of the one Environmental System. Cooperative environmental governance is discussed as a remedy for intragovernmental fragmentation. Thereafter, the chapter considers the practical implications of cooperation between the DMRE, DEFF and the DHWS to achieve an effective One Environmental System.

Chapter 6: Conclusion

This chapter concludes the research. It summarises the findings of the preceding chapters and sets out the recommendations.

Chapter 2:

Legislative framework:

The One Environmental System

1 Introduction

For many years, concerns have been raised about the environmental regulation of mining operations in South Africa.⁵⁵ Investors considered the environmental regulatory framework to be among the most convoluted and over-regulated, because of the lengthy periods associated with obtaining environmental authorisations.⁵⁶ The issue of a fragmented system was exacerbated by the fact that the authorisations were required under various pieces of legislation and from a range of governmental departments.⁵⁷ In response to this fragmented system, Parliament passed laws that gave effect to the existing One Environmental System, which commenced on 8 December 2014.⁵⁸

⁵⁵ In 1990, the South African Parliament and mining industry worked towards incorporating environmental issues into mining legislation and regulations. In 2008, the government started developing a single environmental system for mining; South African Human Rights Commission *National Hearings on the Underlying Socio-economic Challenges of Mining-affected Communities in South Africa* (2016) at 1 available at <https://www.sahrc.org.za/home/21/files/SAHRC%20Mining%20communities%20report%20FINAL.pdf> accessed 17 February 2018; T Humby 'One Environmental System: Aligning the Laws on the Environmental Management of Mining in South Africa' (2015) *Journal of Energy and Natural Resources Law* 111; G Ashton 'An Example of the Impacts of Adopting the 'One Environmental System' of Mining Governance: Some Lessons from MRC's Tormin Mine' (2017) *Conversation around Transparency and Accountability in South Africa's Extractive Sector* 17.

⁵⁶ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* (2019) unpublished parliamentary document presented at the Colloquium on the One Environmental System convened by the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 20 November 2018 (copy on file with author) 3.

⁵⁷ Ashton (2017) *Conversation around Transparency and Accountability in South Africa's Extractive Sector* 17.

⁵⁸ The laws that gave rise to the One Environmental System include, but are not limited to, the following legislative provisions, amendments; regulations and listing notices: Section 50A of the National Environmental Management Act 107 of 1998; section 63A of the National Water Act 36 of 1998, the Mineral and Petroleum Resources Development Amendment Act 49 of 2008; the National Appeal Regulations, 2014 (as amended) (GG 38303-GN 993); National Environmental Management Laws Amendment Act 25 of 2014; National Exemption Regulations 994 of 2014. Department of Mineral Resources 'Government on rollout of One Environmental System' available at <http://www.gov.za/government%E2%80%99s-one-environmental-system-ready-commence-8th-december-2014> accessed on 3 April 2017; Convoluted pieces of legislation caused confusion as to whether the commencement date of the One Environmental System was 1 September 2014 or 8 December 2017. The regulations accompanying NEMA and the MPRDA came into effect on the latter date, therefore leading to it being the accepted date of commencement. Furthermore, the government released a press statement on 6 December 2014 confirming that the rollout of the One Environmental System would start on 8 December 2014.

The One Environmental System stems from an agreement between three governmental departments.⁵⁹ The parties to the agreement include the Department of Mineral Resources and Energy (DMRE), the Department of Environment, Forestry and Fisheries (DEFF) and the Department of Human Settlements, Water and Sanitation (DHWS).⁶⁰ The legislative framework that operated before the One Environmental System precipitated a lack of integration.⁶¹ Environmental management laws were spread between the Mineral and Petroleum Resources Development Act⁶² (MPRDA) and the National Environmental Management Act (NEMA).⁶³

Faced with the need for improved regulation and enforcement of environmental laws at mines, Parliament repealed all the environmental provisions from the MPRDA and consolidated them in NEMA.⁶⁴ One of the most significant aspects of the One Environmental System is its allocation of authority between the three departments.⁶⁵ The DMRE is tasked with issuing mining-related environmental authorisations and enforcing environmental laws in the minerals extraction industry.⁶⁶ The DEFF sets the regulatory framework and is the appeal authority for decisions taken by the DMRE.⁶⁷ Finally, the DHWS is responsible for issuing water use licences as well as regulating and enforcing the National Water Act.⁶⁸ In addition, the “Interdepartmental Project Implementation Committee has been established to coordinate the activities of the three departments.”⁶⁹ By coordinating activities, the three departments are able to “conduct joint site inspections for monitoring and enforcement purposes.”⁷⁰

⁵⁹ *Mineral Sands Resources (Pty) Ltd v Magistrate for the District of Vredendal, Kroutz NO and Others* [2017] 2 All SA 599 (WCC) para 43 (hereinafter *Mineral Sands Resources v Magistrate*).

⁶⁰ In June 2019, all three departments were renamed and had their mandates expanded. The DMRE was previously known as the Department of Mineral Resources; the DEFF was previously known as the Department of Environmental Affairs and the DHWS was previously known as the Department of Water and Sanitation. Section 50A of the National Environmental Management Act 107 of 1998 (hereinafter NEMA); see also section 163A of the National Water Act 36 of 1998 (hereinafter NWA).

⁶¹ Ashton (2017) *Conversation around Transparency and Accountability in South Africa's Extractive Sector* 17.

⁶² Mineral and Petroleum Resources Development Act 28 of 2002 (hereinafter MPRDA).

⁶³ Ashton (2017) *Conversation around Transparency and Accountability in South Africa's Extractive Sector* 17.

⁶⁴ Section 50A(2)(a) NEMA.

⁶⁵ South African Human Rights Commission *National Hearings* 44.

⁶⁶ Section 50A(2)(b) NEMA.

⁶⁷ Section 50A(2)(b)-(c) NEMA.

⁶⁸ Section 50A(2)(d) NEMA.

⁶⁹ Humby (2015) *Journal of Energy and Natural Resources Law* 121; Department of Planning, Monitoring and Evaluation *Report on the Implementation Evaluation of the Environmental Governance in the Mining Sector* (2015) 45 available at <https://evaluations.dpme.gov.za/evaluations/510/documents/ae4636ed-1319-46e3-a03e-7536e7d9a4ec> accessed 23 March 2018.

⁷⁰ South African Human Rights Commission *National Hearings* 43.

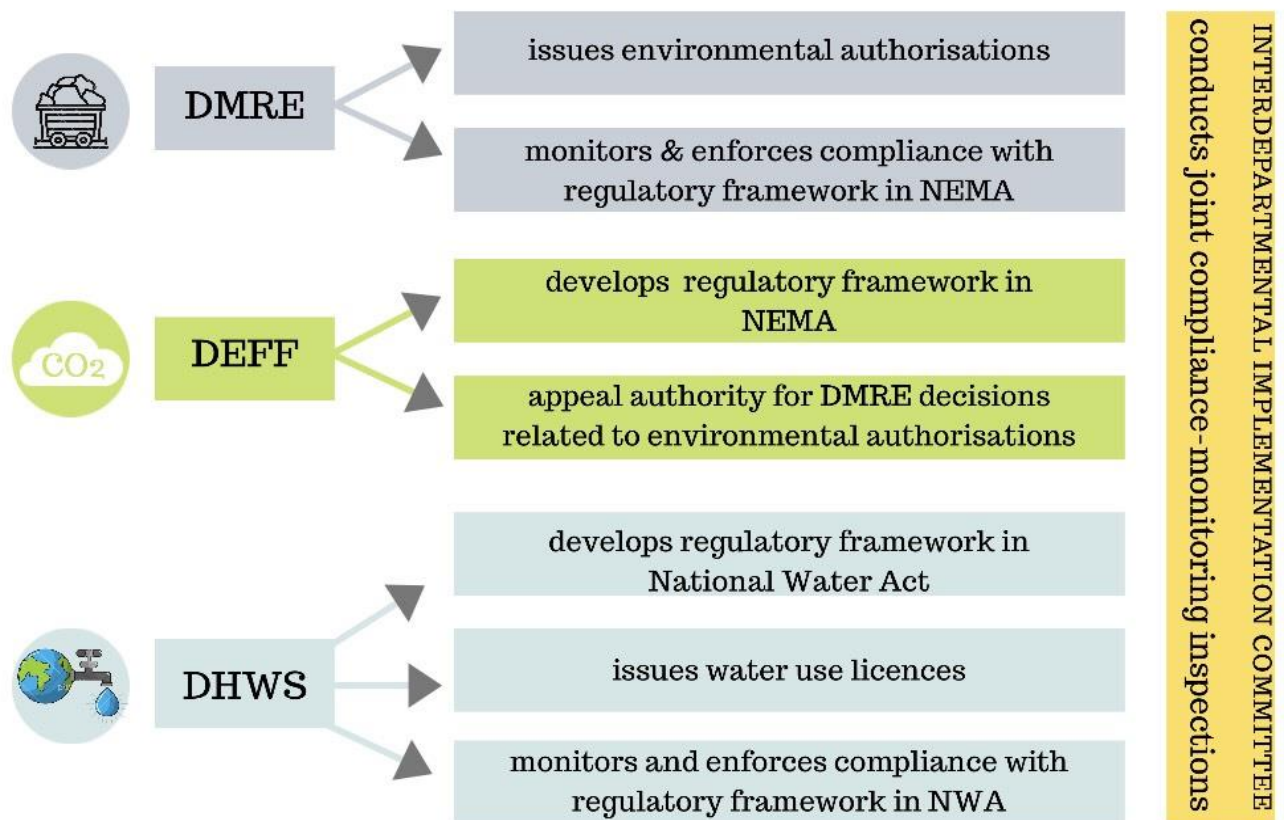


Figure 1: One Environmental System – authorities and responsibilities⁷¹

The main objective of the One Environmental System is to streamline the environmental regulation of mining.⁷² The aim of streamlining is to make the regulation and enforcement of environmental laws related to mining more efficient.⁷³ Streamlining is achieved by consolidating environmental regulation in NEMA.⁷⁴ In addition, the One Environmental System seeks to reduce the time required for processing environmental authorisations.⁷⁵ However, an assessment of the regulation and enforcement of the One Environmental System in this chapter brings into question the efficacy of this framework.⁷⁶

⁷¹ South African Human Rights Commission *National Hearings* 44.

⁷² *Mineral Sands Resources (Pty) Ltd v Magistrate for the District of Vredendal, Kroutz NO and Others* [2017] 2 All SA 599 (WCC) para 1 (hereinafter *Mineral Sands Resources v Magistrate*); Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at XIII available at <https://cer.org.za/news/zero-hour>, accessed 15 March 2018; S Gore & G Howard ‘One Environmental System: reduced time frames for environmental authorisations applications’ 2014 *Environmental Alert* 1; South African Human Rights Commission *National Hearings* 45.

⁷³ South African Human Rights Commission *National Hearings* 45.

⁷⁴ Section 50A(2)(a) NEMA.

⁷⁵ Section 50A(2)(d) NEMA.

⁷⁶ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 1 – 15; see discussion under heading 5 below.

The discussion in this chapter unpacks the provisions governing the One Environmental System. This chapter further assesses the regulation and enforcement of the One Environmental System. Before doing so, the background and key concepts are discussed.

2 Origins of the One Environmental System

An inter-departmental agreement concluded in 2008 envisioned that environmental regulation would no longer be contained in the MPRDA. Instead, it would be wholly regulated by NEMA.⁷⁷ The transfer of the environmental regulation of mining operations from the MPRDA to NEMA would culminate into the One Environmental System for the mining sector.⁷⁸ The implementation of this version of the One Environmental System resulted from the amendments to the MPRDA and NEMA in 2008.⁷⁹ The said amendments arose from the Mineral and Petroleum Resources Amendment Act (2008 MPRDAA)⁸⁰ and the National Environmental Management Amendment Act (2008 NEMAA).⁸¹ These two Acts are subsequently collectively referred to as “the Amendment Acts.”

The Amendment Acts envisioned a three-phase transition for the One Environmental System.⁸² The table below, followed by a comprehensive explanation, sets out the timeline that had been envisioned for the implementation of the One Environmental System.⁸³

⁷⁷ J Ridl & E Couzens ‘Misplacing NEMA? A Consideration of Some Problematic Aspects of South Africa’s New EIA Regulations’ (2010) 13 *PELJ* 107.

⁷⁸ Department of Planning, Monitoring and Evaluation *Report on the Implementation Evaluation of the Environmental Governance in the Mining Sector* 6.

⁷⁹ Mineral and Petroleum Resources Development Amendment Act 49 of 2008; National Environmental Management Amendment Act 62 of 2008.

⁸⁰ Mineral and Petroleum Resources Development Amendment Act 49 of 2008 – GN 437 GG 32151 of 21 April 2009.

⁸¹ National Environmental Management Amendment Act 62 of 2008 – GN 22 GG 31789 of 9 January 2009.

⁸² M Diemont, C Pillay & G Rapson ‘Environmental regulation of the mining industry’ *Lexology* 02 September 2014, available at <https://www.lexology.com/library/detail.aspx?g=dafa2598-0b1b-42c7-9cbf-02aebdd46d5f> accessed 14 August 2017.

⁸³ Diemont, Pillay & Rapson *Lexology*.

DURATION OF PHASE	ACT REGULATING ENVIRONMENTAL ASPECTS OF MINING	AUTHORITY RESPONSIBLE FOR ENFORCING REGULATORY FRAMEWORK
PHASE 1 Enactment date of NEMA/ MPRDA amendments (later 1) + 18 months	NEMA & MPRDA	DMRE & DEFF
PHASE 2 End of phase 1 +18 months	NEMA	DMRE: enforcement DEFF: regulation & appeals
PHASE 3 End of phase 2 going forward	NEMA	DEFF (after consultation with DMRE)

Figure 2: One Environmental System – transition timeline⁸⁴

During the first phase of the transition, the *status quo* as regards the regulation and enforcement of environmental laws at mines was to remain in place until the promulgation of the 2008 MPRDAA or section 2 of the 2008 NEMAA, whichever was the later enactment.⁸⁵ The 2008 MPRDAA was the later enactment.⁸⁶ Its coming into effect on 7 June 2013 marked the commencement of the three-phase transition.⁸⁷ Phase one was to be succeeded by two phases over a period of three years.⁸⁸ The transition would result in the shift of the environmental regulation of mining to NEMA from the MPRDA.⁸⁹ Ultimately, the plan was to have the DEFF as the authority responsible for the regulation and enforcement of NEMA.⁹⁰

The agreement had envisioned that, in phase two, all provisions relating to the environment would be moved from the MPRDA to NEMA.⁹¹ The DMRE would be the authority responsible for implementing the provisions in NEMA relating to mining, while the DEFF would be the appeal authority for decisions taken by the DMRE.⁹² In terms of the agreement, the DEFF

⁸⁴ Summary of Timeline: Diemont, Pillay & Rapson *Lexology*.

⁸⁵ Department of Planning, Monitoring and Evaluation *Report on the Implementation Evaluation of the Environmental Governance in the Mining Sector 6*.

⁸⁶ Diemont, Pillay & Rapson *Lexology*.

⁸⁷ Diemont, Pillay & Rapson *Lexology*.

⁸⁸ Diemont, Pillay & Rapson *Lexology*.

⁸⁹ Department of Planning, Monitoring and Evaluation *Report on the Implementation Evaluation of the Environmental Governance in the Mining Sector 6*.

⁹⁰ Diemont, Pillay & Rapson *Lexology*.

⁹¹ Department of Planning, Monitoring and Evaluation *Report on the Implementation Evaluation of the Environmental Governance in the Mining Sector 6*.

⁹² Ridl & Couzens (2010) *PELJ* 108.

would also be tasked with setting out policies, legislation and regulations.⁹³ Phase two was to last for 18 months, after which the final phase would follow.⁹⁴ The final phase entailed the DMRE handing over all enforcement duties to the DEFF.⁹⁵ At this point, the One Environmental System would be complete with all environmental provisions contained in NEMA under the control of the DEFF⁹⁶

The agreement did not unfold as had been planned.⁹⁷ On 2 September 2014, the National Environmental Laws Amendment Act (2014 NEMLAA) was passed.⁹⁸ The impact of this promulgation was that phase two of the “original 2008 plan was implemented immediately and phase three never came into force.”⁹⁹ Therefore, the DMRE retained its power to enforce environmental compliance in the minerals extraction industry, and the DEFF remained “the appeal authority for appeals lodged against decisions of the DMRE.”¹⁰⁰

As already mentioned, the One Environmental System was introduced to streamline the environmental regulation of mining.¹⁰¹ Critics argue however that the regulatory framework was mainly propelled by the influence of powerful economic players in the minerals industry.¹⁰² The drive was to overcome, what the mining industry perceived to have been, unreasonable delays in the processing of authorisations in relation to mining operations, which were caused by objections lodged by the DEFF through NEMA.¹⁰³

To understand the external influence of the mining industry on the establishment of the One Environmental System, regard must be had to the Joint Parliamentary Portfolio Committee meeting for Mineral Resources, Environment and Water of September 2013.¹⁰⁴ The topics of discussion included an assessment of the ills which the One Environmental System sought to

⁹³ Ridl & Couzens (2010) *PELJ* 108.

⁹⁴ Diemont, Pillay & Rapson *Lexology*.

⁹⁵ Humby (2015) *Journal of Energy and Natural Resources Law* 121; Diemont, Pillay & Rapson *Lexology*.

⁹⁶ Humby (2015) *Journal of Energy and Natural Resources Law* 121; Diemont, Pillay & Rapson *Lexology*.

⁹⁷ Diemont, Pillay & Rapson *Lexology*.

⁹⁸ National Environmental Management Laws Amendment Act 25 of 2014.

⁹⁹ Department of Planning, Monitoring and Evaluation *Report on the Implementation Evaluation of the Environmental Governance in the Mining Sector* 6.

¹⁰⁰ Ridl & Couzens (2010) *PELJ* 108.

¹⁰¹ South African Human Rights Commission *National Hearings* 45.

¹⁰² Ashton (2017) *Conversation around Transparency and Accountability in South Africa's Extractive Sector* 17.

¹⁰³ Ashton (2017) *Conversation around Transparency and Accountability in South Africa's Extractive Sector* 17.

¹⁰⁴ Parliamentary Monitoring Group ‘Mine Environmental Management: Briefing by the Departments of Environmental Affairs and Mineral Resources’ 10 September 2013, available at <https://pmg.org.za/committee-meeting/16338/> accessed on 17 February 2019; Humby (2015) *Journal of Energy and Natural Resources Law* 121.

cure and the regulatory framework to cure the ills identified.¹⁰⁵ The tone of discussion was “generally business-centric and pro-investment.”¹⁰⁶ During its two-hour meeting, the committee made no mention of the constitutional environmental right, rights of communities and duties that may be owed to the environment.¹⁰⁷ Much more weight was placed on the need to streamline and shorten timeframes for mining, environmental and water authorisations which would run parallel to each other and not sequentially.¹⁰⁸ Emphasis was also placed on centralising and limiting the appeals process and resorting to ‘cooperative governance solutions’ when departments in the system failed to fulfill their mandates.¹⁰⁹

Apart from the influence of economic forces, Humby suggests that the One Environmental System came into effect as a result of a *quid pro quo* between the DEFF and DMRE.¹¹⁰ Essentially, the DEFF Minister agreed to have the DMRE Minister as the enforcement authority only because the DEFF’s authority to determine the scope of the DMRE’s authority was expanded.¹¹¹ For example, the 2008 NEMAA conferred a considerable increase of power on the environmental authority.¹¹² Although the 2014 NEMLAA did not make substantive changes to the DEFF’s powers, it strengthened certain provisions in NEMA dealing with financial provisions and liability for pollution.¹¹³ For instance, when the DMRE Minister considers an application for environmental authorisation, he must also assess the applicant’s ability to comply with prescribed financial provisions.¹¹⁴

¹⁰⁵ Parliamentary Monitoring Group ‘Mine Environmental Management: Briefing by the Departments of Environmental Affairs and Mineral Resources’ 10 September 2013.

¹⁰⁶ Humby (2015) *Journal of Energy and Natural Resources Law* 122.

¹⁰⁷ Parliamentary Monitoring Group ‘Mine Environmental Management: Briefing by the Departments of Environmental Affairs and Mineral Resources’ 10 September 2013; Humby (2015) *Journal of Energy and Natural Resources Law* 122.

¹⁰⁸ Parliamentary Monitoring Group ‘Mine Environmental Management: Briefing by the Departments of Environmental Affairs and Mineral Resources’ 10 September 2013; Humby (2015) *Journal of Energy and Natural Resources Law* 122.

¹⁰⁹ Parliamentary Monitoring Group ‘Mine Environmental Management: Briefing by the Departments of Environmental Affairs and Mineral Resources’ 10 September 2013; Humby (2015) *Journal of Energy and Natural Resources Law* 122.

¹¹⁰ Humby (2015) *Journal of Energy and Natural Resources Law* 123.

¹¹¹ Humby (2015) *Journal of Energy and Natural Resources Law* 123.

¹¹² These powers related to the management and control of residue stockpiles and deposits, consultations with interested and affected parties, mine closer requirements and financial provision for rehabilitation. Humby (2015) *Journal of Energy and Natural Resources Law* 123.

¹¹³ Humby (2015) *Journal of Energy and Natural Resources Law* 123.

¹¹⁴ Section 24O(1)(b)(iiiA) (as amended by the National Environmental Management Laws Amendment Act 25 of 2014); Humby (2015) *Journal of Energy and Natural Resources Law* 123.

3 Key Concepts of the One Environmental System

An understanding of the One Environmental System requires an overview of its key concepts. The concepts which will be explained include: mining right, listed activities, environmental authorisation, environmental impact assessment, environmental management programme, environmental management inspectors and environmental mineral resource inspectors. These concepts are imperative because they speak to the regulating and enforcing duties of the departments involved in the One Environmental System.

3.1 Mining Right and Environmental Management Programmes

A mining right is an entitlement to mine.¹¹⁵ The lodging of applications for mining rights is dealt with in section 22 of the MPRDA.¹¹⁶ The DMRE Minister must only grant a mining right if certain conditions are met.¹¹⁷ Among the conditions is that the mining must not cause unacceptable pollution or ecological and environmental degradation.¹¹⁸ In addition, the applicant must obtain an environmental management programme and environmental authorisation to conduct mining.¹¹⁹

Before the commencement of the One Environmental System, applicants for mining rights required two environmental management programmes; one in terms of the MPRDA and the other in terms of NEMA.¹²⁰ Section 23(5) of the MPRDA provided that a mining right came into effect on the date on which the applicant's mining Environmental Management Programme (MPRDA EMP) was approved in terms of section 39(4) of the MPRDA.¹²¹ The holder of a mining right had to consider, investigate, assess and communicate the impact of its mining on the environment.¹²² Such environmental impacts had to be managed in accordance with its approved MPRDA EMP.¹²³ An MPRDA EMP was to be produced after conducting an Environmental Impact Assessment.¹²⁴ When considering an MPRDA EMP, the DMRE had to

¹¹⁵ Section 1 MPRDA.

¹¹⁶ Section 22 MPRDA.

¹¹⁷ Section 23 MPRDA.

¹¹⁸ Section 23 MPRDA.

¹¹⁹ Section 24N & 24 NEMA respectively; *Mineral Sands Resources v Magistrate* para 14.

¹²⁰ *Mineral Sands Resources v Magistrate* para 15 – 17.

¹²¹ *Mineral Sands Resources v Magistrate* para 15; section 39 MPRDA has been repealed.

¹²² *Mineral Sands Resources v Magistrate* para 15; section 38 MPRDA has been repealed.

¹²³ *Mineral Sands Resources v Magistrate* para 15; section 38 MPRDA has been repealed.

¹²⁴ Section 39 (1) – has been repealed.

consult with the DEFF.¹²⁵ The DMRE could not approve an MPRDA EMP without taking into account the DEFF's comments.¹²⁶

The need for an MPRDA EMP was one of the reasons the legislative regime that operated before the One Environmental System was considered convoluted by applicants and holders of mining rights.¹²⁷ Because NEMA also required an EMP from mining rights applicants, the MPRDA EMP was deemed redundant.¹²⁸ Therefore, the provision requiring an MPRDA EMP was repealed.¹²⁹ The One Environmental System has simplified the application process for mining rights in that an MPRDA EMP is no longer required.¹³⁰ The effect of this provision is that an MPRDA EMP that was approved before 8 December 2014 is deemed to be an EMP in terms of section 24N of NEMA.¹³¹

“The main function of the EMP is to set out the proposed management, mitigation, protection and remedial measures that are available to address the environmental impacts of the listed activities.”¹³² Applications for NEMA EMPs may be considered by the DEFF, DMRE or a member of a provincial executive council (MEC).¹³³ Section 24N of NEMA may require a NEMA EMP to be submitted when one applies for environmental authorisation.¹³⁴

3.2 Environmental Authorisation

An environmental authorisation is required by an applicant seeking to commence activities identified in so-called Listing Notices.¹³⁵ Listing Notices identify activities requiring environmental authorisation and the authority responsible for granting environmental authorisation.¹³⁶ One of the main features of NEMA, as amended, is that mining has been included as a listed activity.¹³⁷ The DEFF remains the competent authority for identifying listed

¹²⁵ *Mineral Sands Resources v Magistrate* para 16; section 40 MPRDA has been repealed.

¹²⁶ *Mineral Sands Resources v Magistrate* para 16; section 39(4)(b) MPRDA has been repealed.

¹²⁷ *Mineral Sands Resources v Magistrate* para 29.

¹²⁸ *Mineral Sands Resources v Magistrate* para 27.

¹²⁹ *Mineral Sands Resources v Magistrate* para 27.

¹³⁰ Section 12(4) National Environmental Management Amendment Act 62 of 2008; *Mineral Sands Resources v Magistrate* para 30 & 58.

¹³¹ Section 12(4) National Environmental Management Amendment Act 62 of 2008; *Mineral Sands Resources v Magistrate* para 30.

¹³² *Mineral Sands Resources v Magistrate* para 9.

¹³³ Section 24N NEMA, *Mineral Sands Resources v Magistrate* para 22.

¹³⁴ Section 24N NEMA, *Mineral Sands Resources v Magistrate* para 22.

¹³⁵ Section 24 NEMA; The DEFF Minister is responsible for promulgating Listing Notices in terms of section 24 of NEMA.

¹³⁶ *Mineral Sands Resources v Magistrate* para 5 & 7.

¹³⁷ *Mineral Sands Resources v Magistrate* para 21.

activities.¹³⁸ However the DMRE is responsible for granting environmental authorisations where listed activities directly relate to mining.¹³⁹

Before the One Environmental System, the DMRE was the competent authority for issuing environmental authorisations for *related activities* occurring in prospecting, mining, exploration or production' areas.¹⁴⁰ However, NEMA has broadened the scope of the DMRE's enforcement authority, which must now be invoked when listed activities *directly relate* to the prospecting, mining and primary processing of mineral resources.¹⁴¹ The importance of this change lies in the "removal of the spatial restriction" on the DMRE's enforcement power.¹⁴² "The activities 'directly related' to mining activities" no longer need to occur in a mining area.¹⁴³ They may occur anywhere. The DMRE's authority is not limited to prospecting and mining as primary activities. It extends to remediation and rehabilitation endeavours.¹⁴⁴

The extension of the DMRE's authority over environmental authorisations is a product of the removal of section 13 of the 2008 NEMAA.¹⁴⁵ This section would have seen the enforcement authority shifting from the mining authorities and conferred on the environmental authorities.¹⁴⁶ The removal of that provision essentially entrenches the permanence of the DMRE's enforcement authority in relation to environmental authorisations.¹⁴⁷

To ensure the efficient operation of the One Environmental System, NEMA has laid down a process to be followed by applicants for environmental authorisation who are not satisfied with the DMRE's decisions.¹⁴⁸ Where the DMRE has not made a decision regarding an application within the prescribed time-frame, the applicant may apply to the DEFF to consider the application.¹⁴⁹ The DEFF Minister may make a decision regarding environmental authorisations only if the DMRE Minister is consulted and if due processes are followed.¹⁵⁰ This appeals process gives effect to the cooperative governance dimension of the One

¹³⁸ *Mineral Sands Resources v Magistrate* para 22.

¹³⁹ Sections 24C(2A) NEMA & section 38A MPRDA.

¹⁴⁰ Humby (2015) *Journal of Energy and Natural Resources Law* 125.

¹⁴¹ Sections 24C(2A) of NEMA; Humby (2015) *Journal of Energy and Natural Resources Law* 125.

¹⁴² Humby (2015) *Journal of Energy and Natural Resources Law* 125.

¹⁴³ Humby (2015) *Journal of Energy and Natural Resources Law* 125.

¹⁴⁴ Humby (2015) *Journal of Energy and Natural Resources Law* 125.

¹⁴⁵ 62 of 2008.

¹⁴⁶ Diemont, Pillay & Rapson *Lexology*; Humby (2015) *Journal of Energy and Natural Resources Law* 125.

¹⁴⁷ Diemont, Pillay & Rapson *Lexology*; Humby (2015) *Journal of Energy and Natural Resources Law* 125.

¹⁴⁸ Section 24C(2C)(a)(f) NEMA; *Mineral Sands Resources v Magistrate* para 100.

¹⁴⁹ Section 24C(2C)(a) NEMA; *Mineral Sands Resources v Magistrate* para 100.

¹⁵⁰ The process is set out in Section 24C(2C)(a)-(f) NEMA; *Mineral Sands Resources v Magistrate* para 100.

Environmental System.¹⁵¹ The concept of cooperative governance is explored in chapter five of this research.

3.3 Inspectors

To ensure compliance with these environmental laws, environmental management inspectors (environmental inspectors) and environmental mineral resources inspector (mining inspectors) have been appointed.¹⁵² The enforcement of NEMA and specific environmental management Acts (SEMA) by varying inspectors is dealt with in part 2 of chapter 7 of NEMA.¹⁵³

This discussion focusses on the legally-mandated powers and functions of environmental and mining inspectors as well their concurrent jurisdiction to enforce environmental laws at mines.¹⁵⁴ Although, inspectors are tasked with applying and enforcing criminal sanctions, their functions are not limited to criminal law.¹⁵⁵ They also deal with civil law matters such as issuing permits, licences and directives.¹⁵⁶

3.3.1 Environmental Management Inspectors

Even before the One Environmental System, environmental management inspectors (environmental inspectors) were appointed by the DEFF Minister, the DHWS Minister and MECs from provincial government.¹⁵⁷ The environmental inspectors appointed by these authorities are assigned as either “national, water and provincial inspectors respectively.”¹⁵⁸ Processes have been put in place to appoint environmental inspectors at the local government level.¹⁵⁹ To give effect to this process at the local level, a series of memoranda of understanding have already been adopted with the relevant authorities at municipal level.¹⁶⁰

Environmental inspectors have a mandate to “monitor and enforce compliance with the laws for which they have been designated.”¹⁶¹ They may investigate any conduct in respect of which there is a reasonable suspicion that the conduct might constitute an offence or a breach of the

¹⁵¹ Humby (2015) *Journal of Energy and Natural Resources Law* 122.

¹⁵² Section 31BA & 31BB NEMA respectively.

¹⁵³ The term ‘specific environmental management Acts’ is defined in section 1 of NEMA.

¹⁵⁴ Part 2 of Chapter 7 NEMA.

¹⁵⁵ Part 2 of Chapter 7 NEMA; see chapter 4 of this dissertation.

¹⁵⁶ Part 2 of Chapter 7 NEMA; see chapter 4 of this dissertation.

¹⁵⁷ Section 31B NEMA.

¹⁵⁸ Sections 31B, 31BA and 31C NEMA; *Mineral Sands Resources v Magistrate* para 12

¹⁵⁹ J Glazewski, P Snijman & L Plit ‘Compliance with and Enforcement of Environmental Laws’ in J Glazewski *Environmental Law in South Africa* 36.

¹⁶⁰ Glazewski et al. ‘Compliance with and Enforcement of Environmental Laws’ in *Environmental Law* 36.

¹⁶¹ Section 31G of NEMA.

law.”¹⁶² Environmental inspectors have general powers that allow them, *inter alia*, to question persons, request documentation and to take photographs and samples.¹⁶³ Environmental inspectors are peace officers and may exercise all the powers assigned to peace officers, in terms of chapter 2 of the Criminal Procedure, to comply with their mandate.¹⁶⁴

3.3.2 Environmental Mineral Resource Inspectors

The introduction of the One Environmental System saw the establishment of the environmental mineral resource inspectorate.¹⁶⁵ NEMA empowers the DMRE Minister to designate any staff member from the DMRE as an environmental mineral resource inspector (mining inspectors).¹⁶⁶ Mining inspectors are mandated to monitor compliance and enforce the provisions of NEMA or of SEMA.¹⁶⁷

Mining inspectors ordinarily have the functions and general powers given to national, water and provincial inspectors.¹⁶⁸ In other words, mining inspectors are given the same powers as environmental inspectors.¹⁶⁹ The question arises as to whether environmental inspectors and mining inspectors have “concurrent jurisdiction to monitor compliance with, and enforce, the provisions of NEMA” in relation to mining.¹⁷⁰ The provisions of sections 31D(4) – (9) of NEMA become relevant in this regard.¹⁷¹

The aforementioned provisions were promulgated to ensure that enforcement takes place when mining inspectors experience capacity challenges.¹⁷² If mining inspectors experience capacity challenges in monitoring and enforcing NEMA, the DEFF may instruct environmental inspectors to enforce compliance with NEMA provisions.¹⁷³ Where there is a lack of enforcement by mining inspectors, the following process applies:

¹⁶² Section 31 of NEMA; *Mineral Sands Resources v Magistrate* para 13.

¹⁶³ Section 31H of NEMA; *Mineral Sands Resources v Magistrate* para 13.

¹⁶⁴ Criminal Procedure Act 51 of 1977.

¹⁶⁵ Section 31BB NEMA; Humby (2015) *Journal of Energy and Natural Resources Law* 127.

¹⁶⁶ Section 31BB NEMA; *Mineral Sands Resources v Magistrate* para 23.

¹⁶⁷ Section 31D(2A) NEMA; *Mineral Sands Resources v Magistrate* para 23.

¹⁶⁸ Sections 31G and 31H NEMA; *Mineral Sands Resources v Magistrate* para 24.

¹⁶⁹ Section 31D(3)NEMA ; *Mineral Sands Resources v Magistrate* para 24.

¹⁷⁰ *Mineral Sands Resources v Magistrate* para 25.

¹⁷¹ *Mineral Sands Resources v Magistrate* para 25.

¹⁷² *Mineral Sands Resources v Magistrate* para 26.

¹⁷³Section 31D(4) NEMA; *Mineral Sands Resources v Magistrate* para 25.

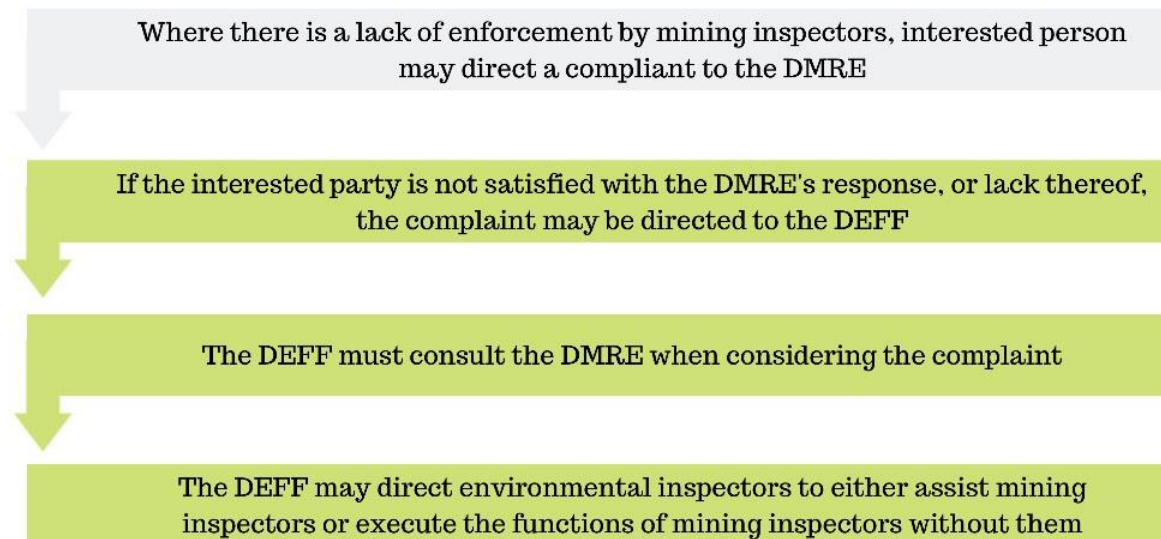


Figure 3: Process to be followed when there is a lack of enforcement by mining inspectors¹⁷⁴

The above process shows that interested parties may lay a complaint with the DMRE when compliance monitoring and enforcement functions are inadequately fulfilled by mining inspectors.¹⁷⁵ If the interested party is not satisfied with the DMRE's response, the DEFF may be approached with the matter.¹⁷⁶ After consulting the DMRE on the matter, the DEFF may offer assistance or support to the DMRE to fulfill the compliance monitoring and enforcement obligations of the DMRE in terms of NEMA.¹⁷⁷ Alternatively, environmental inspectors may be directed, by the DEFF, to undertake the compliance monitoring and enforcement functions.¹⁷⁸

3.3.3 Inspectors' Concurrent Jurisdiction to Enforce compliance with environmental laws at mines

The distinction of inspectorates raises the question of whether they have concurrent jurisdiction to enforce compliance with environmental laws at mines.¹⁷⁹ The question stems from the fact that there has been confusion about which inspectorate is the competent authority to enforce environmental laws at mines.¹⁸⁰ This question was the subject of contention in *Mineral Sands*

¹⁷⁴ Summary of section 31D NEMA.

¹⁷⁵ Section 31D(5) NEMA; *Mineral Sands Resources v Magistrate* para 25.

¹⁷⁶ Section 31D(6) NEMA; *Mineral Sands Resources v Magistrate* para 25.

¹⁷⁷ Section 31D(7) & (8) NEMA; *Mineral Sands Resources v Magistrate* para 25.

¹⁷⁸ Section 31D(9) NEMA; *Mineral Sands Resources v Magistrate* para 25.

¹⁷⁹ *Mineral Sands Resources v Magistrate* para 25.

¹⁸⁰ *Mineral Sands Resources v Magistrate* para 25.

Resources (Pty) Ltd v Magistrate for the District of Vredendal, Kroutz NO and Others (Mineral Sands Resources v Magistrate).¹⁸¹

It has been established that environmental inspectors are assigned as either national, water and provincial inspectors.¹⁸² National and water inspectors may be appointed to enforce NEMA and SEMA, although not entirely for provisions relating to mining, as these are enforced by mining inspector.¹⁸³ There is a possibility that, in practice, water inspectors are only instructed to enforce the National Water Act.¹⁸⁴ However, NEMA does not expressly bar water inspectors from enforcing NEMA or national inspectors from enforcing the Water Act.¹⁸⁵

Provincial inspectors may be appointed to enforce only the provisions of NEMA and SEMA that fall within the jurisdiction of the province or when the powers or duties to enforce such provisions are delegated to the province.¹⁸⁶ Of importance is whether national and water inspectors may enforce environmental provisions which are managed by the provinces.¹⁸⁷ There is nothing in NEMA that suggests such a restriction.¹⁸⁸

With regard to mining inspectors, they may only monitor and enforce the provisions of environmental legislation that confer powers to the DMRE Minister.¹⁸⁹ The fact that DMRE Minister has the power to grant environmental authorisation for activities related to mining means that “mining inspectors can monitor and enforce compliance with the terms of environmental authorisations issued for mining purposes.”¹⁹⁰ They may also implement provisions that apply when activities are unlawfully conducted without obtaining environmental authorisation to engage in said activities.¹⁹¹

In *Mineral Sands Resources v Magistrate*, the court dismissed the argument that environmental and mining inspectors have concurrent jurisdiction over mining matters.¹⁹² The clarification lies in subsections 31D(4)-(9) of NEMA.¹⁹³ These subsections contain an elaborate process to

¹⁸¹ *Mineral Sands Resources v Magistrate* para 25.

¹⁸² Sections 31B, 31BA and 31C NEMA; *Mineral Sands Resources v Magistrate* para 12

¹⁸³ Sections 31B & 31BA NEMA.

¹⁸⁴ Section 31BA NEMA; *Mineral Sands Resources v Magistrate* para 42.

¹⁸⁵ Section 31D(1) NEMA; *Mineral Sands Resources v Magistrate* para 92.

¹⁸⁶ Section 31C NEMA.

¹⁸⁷ *Mineral Sands Resources v Magistrate* para 93.

¹⁸⁸ *Mineral Sands Resources v Magistrate* para 93.

¹⁸⁹ Section 31D(2A) NEMA.

¹⁹⁰ Section 50A(2)(b) NEMA; Humby (2015) *Journal of Energy and Natural Resources Law* 125.

¹⁹¹ *Mineral Sands Resources v Magistrate* para 94.

¹⁹² *Mineral Sands Resources v Magistrate* para 96.

¹⁹³ *Mineral Sands Resources v Magistrate* para 96.

follow when a complainant argues that mining inspectors are failing to fulfil their functions.¹⁹⁴ Section 31D(4), which permits environmental inspectors to intervene when mining inspectors lack capacity, is premised on the fact that section 31D(2A) effectively confers exclusive jurisdiction on mining inspectors.¹⁹⁵

Section 31D(4) allows environmental inspectors to enforce environmental laws relating to mining where mining inspectors are unable to fulfill their duties.¹⁹⁶ This option may only be resorted to if both the DMRE Minister and DEFF Minister agree to it.¹⁹⁷ Mere consultation between the ministers does not suffice.¹⁹⁸ If environmental and mining inspectors had concurrent jurisdiction to implement environmental laws at mines, the precondition in section 31D(4) would be redundant.¹⁹⁹ The articulate process laid down in subsections 31D(4)-(9) would also be “unnecessary if, from the outset and without the concurrence of the DMRE Minister, national inspectors could simply enforce compliance with” NEMA and SEMAs.²⁰⁰

“Although the mandates of national, water and provincial inspectors may overlap, there is no doubt that efficient administration is generally better achieved by non-overlapping mandates.”²⁰¹ The outcome of an efficient administration would be achieved by interpreting section 31D in a way that gives mining inspectors exclusive jurisdiction to implement NEMA and SEMA, while considering the qualifications in subsections 31D(4)-(9).²⁰² According to the court in *Mineral Sands Resources v Magistrate*, such an interpretation best carries out the desired purpose of the One Environmental System.²⁰³

The interpretation of the court guards against the prejudice that would arise against persons involved in mining if environmental and mining inspectors were to have concurrent jurisdiction to enforce compliance with environmental laws at mines.²⁰⁴ The court stated that it would be “administratively inefficient and potentially unfair to persons identified for investigation to be subjected to bifurcated investigations and potentially contradictory instructions.”²⁰⁵ Instead of

¹⁹⁴ *Mineral Sands Resources v Magistrate* para 96.

¹⁹⁵ *Mineral Sands Resources v Magistrate* para 96.

¹⁹⁶ Section 31D(4) NEMA.

¹⁹⁷ Section 31D(4) NEMA.

¹⁹⁸ *Mineral Sands Resources v Magistrate* para 96.

¹⁹⁹ *Mineral Sands Resources v Magistrate* para 96.

²⁰⁰ *Mineral Sands Resources v Magistrate* para 97.

²⁰¹ *Mineral Sands Resources v Magistrate* para 98.

²⁰² *Mineral Sands Resources v Magistrate* para 98.

²⁰³ *Mineral Sands Resources v Magistrate* para 98.

²⁰⁴ *Mineral Sands Resources v Magistrate* para 95.

²⁰⁵ *Mineral Sands Resources v Magistrate* para 95.

dwelling on strained legal distinctions, the solution to the issue of jurisdiction lies in efficient cooperative governance, a concept that is explored in chapter five of this research.

4 Regulation and Enforcement of the One Environmental System

The One Environmental System is expressly recognised in section 50A of NEMA.²⁰⁶ It is incorporated verbatim into section 163A of the National Water Act.²⁰⁷ In terms of these provisions, NEMA regulates the environmental aspects of mining to give effect to the One Environmental System.²⁰⁸ In addition, all environmental provisions will be repealed from the MPRDA.²⁰⁹ The regulatory framework for environmental laws relating to mining must be set by the DEFF.²¹⁰ The DMRE is entrusted with the implementation of NEMA provisions relating to mining, such as the issuing of environmental authorisations.²¹¹ The appeal authority for decisions relating to the issuance of environmental authorisations is the DEFF.²¹² The DEFF also sets the regulatory framework. The One Environmental System further requires the DEFF Minister, DMRE Minister and DHWS Minister to synchronise the processes related to the issuing of authorisations in their departments to a fixed time-frame of 300 days.²¹³

The coming into effect of the One Environmental System resulted in the abolishment of sections 38-42 of the MPRDA.²¹⁴ These provisions dealt with, *inter alia*, environmental impact assessments and the approval of MPRDA EMPs as a pre-requisite for the granting of mining rights.²¹⁵ What the court refer to as an obscure provision has been inserted as section 38A of the MPRDA with the title 'environmental authorisation'.²¹⁶ This provision provides that the DMRE is now the competent authority for enforcing environmental provisions in terms of NEMA in relation to mining activities or ancillary activities on a mining area.²¹⁷ Furthermore,

²⁰⁶ Section 50A NEMA; *Mineral Sands Resources v Magistrate* para 42.

²⁰⁷ Section 163 NWA; *Mineral Sands Resources v Magistrate* para 42.

²⁰⁸ Sections 50A(a) of NEMA and 163A(a) of the NWA.

²⁰⁹ Sections 50A(a) of NEMA and 163A(a) of the NWA.

²¹⁰ Sections 50A(b) & (c) of NEMA and 163A(b) & (c) of the NWA.

²¹¹ Sections 50A(b) of NEMA and 163A(b) of the NWA.

²¹² Sections 50A(c) of NEMA and 163A(c) of the NWA.

²¹³ *Mineral Sands Resources v Magistrate* para 43; Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 12.

²¹⁴ *Mineral Sands Resources v Magistrate* para 27.

²¹⁵ *Mineral Sands Resources v Magistrate* para 27.

²¹⁶ *Mineral Sands Resources v Magistrate* para 27.

²¹⁷ Section 38A MPRDA; *Mineral Sands Resources v Magistrate* para 27.

an environmental authorisation is a prerequisite for the approval of a mining right and is to be issued by the DMRE.²¹⁸

The provisions setting out the enforcement authority for the One Environmental System have caused much confusion, which has necessitated judicial intervention.²¹⁹ *Mineral Sands Resources v Magistrate* highlights the legislative uncertainty in the regulation of the environmental aspects of mining.²²⁰ This case provides certainty as to the legal position of the enforcement authority in the One Environmental System.²²¹

The provisions giving effect to the One Environmental System became the subject of a Western Cape High Court decision involving an Australian mining company's mineral sands project at its Tormin mine in the West Coast.²²² *Mineral Sands Resources (Pty) Ltd (Mineral Sands Resources)* came under fire after a sea cliff located in front of its Tormin mine collapsed into the sea.²²³ After receiving complaints from civil society about alleged criminal activities that contravened NEMA, the national inspectors from the DEFF obtained a search and seizure warrant and executed the warrant at the Tormin mine.²²⁴ The court declared that the search and seizure warrant had been unlawfully obtained, inter alia, because the DEFF no longer had jurisdiction to enforce NEMA in respect of mining activities.²²⁵ As regards national inspectors, they can only enforce compliance with environmental laws when mining inspectors fail to do so and proper processes are followed under section 31D.²²⁶

The application raised questions of (i) which governmental department the One Environmental System holds the authority to implement environmental legislation at mines, and (ii) "the powers of various inspectors to monitor and enforce compliance with environmental legislation."²²⁷

²¹⁸ Section 38A(2) MPRDA; *Mineral Sands Resources v Magistrate* para 27.

²¹⁹ *Mineral Sands Resources v Magistrate* para 1.

²²⁰ *Mineral Sands Resources v Magistrate* para 1.

²²¹ *Mineral Sands Resources v Magistrate* para 90.

²²² *Mineral Sands Resources v Magistrate* para 1; South African Human Rights Commission *National Hearings* 45; J Yield 'GroundUp: Critical Court Shutdown on Mining and Environment' *Daily Maverick* 19 February 2017 available at <https://www.dailymaverick.co.za/article/2017-02-19-groundup-critical-court-showdown-on-mining-and-environment/#.WWJ0VoiGPIV> accessed on 3 April 2017.

²²³ *Mineral Sands Resources v Magistrate* para 52; Yield 'GroundUp: Critical Court Shutdown on Mining and Environment' *Daily Maverick* 19 February 2017.

²²⁴ *Mineral Sands Resources v Magistrate* para 72-80.

²²⁵ *Mineral Sands Resources v Magistrate* para 90, 98-100, Section 213(b) NEMA.

²²⁶ *Mineral Sands Resources v Magistrate* para 96.

²²⁷ *Mineral Sands Resources v Magistrate* para 1.

To provide clarity on these questions, the court considered section 38A of the MPRDA read with section 31D of NEMA respectively.²²⁸ These are among the most significant amendments dealing with the enforcement jurisdiction of the DMRE and the DEFF.²²⁹ Section 38A of the MPRDA provides that the DMRE is responsible for the implementation of NEMA at mines.²³⁰ Section 31D of NEMA empowers the DEFF Minister to appoint national inspectors to enforce environmental laws relating to mining where mining inspectors are unable to fulfill their duties.²³¹ On a simple reading of section 38A, one would assume that the DMRE has been vested with sole jurisdiction to police compliance of all NEMA provisions at mines.²³² *Mineral Sands Resources v Magistrate* illustrates that this provision is not as simple as it seems because it may be interpreted in various ways.²³³ The discussion that follows focuses on section 38A as the findings of the court on section 31D have already been discussed under part 3 of this chapter.

In its interpretation of section 38A of the MPRDA, the DEFF contended that its authority to implement environmental laws at mines was not withdrawn by the One Environmental System.²³⁴ It argued that the DEFF and DMRE shared the authority to implement NEMA's provisions at mines.²³⁵ Since section 38A is titled 'environmental authorisations', "the provision can be construed as simply confirming that the DMRE is the sole competent authority for granting environmental authorisations in mining operations," and not the authority for enforcing all NEMA provisions relating to mining activities.²³⁶

The court described section 38A as a "delphic provision", meaning that it is obscure and ambiguous.²³⁷ It admitted that, as suggested by the DEFF, the section could be interpreted as merely "confirming that the DMRE Minister is the competent authority for granting environmental authorisations."²³⁸ However, such an interpretation was not adopted by the court.²³⁹ Instead, the court posited that section 38A must be broadly interpreted to apply, not

²²⁸ *Mineral Sands Resources v Magistrate* para 90-101.

²²⁹ W Badenhorst 'The Delphic Provisions' *Hogen Lovells* 30 March 2017 available at <https://www.hoganlovells.com/en/publications/the-delphic-provision>, accessed on 10 April 2017. The law firm, Hogan Lovells SA, represented Mineral Sands Resources in *Mineral Sands Resources v Magistrate*.

²³⁰ Section 38A MPRDA.

²³¹ Section 31D NEMA.

²³² Badenhorst 'The Delphic Provisions' *Hogen Lovells* 30 March 2017.

²³³ Badenhorst 'The Delphic Provisions' *Hogen Lovells* 30 March 2017.

²³⁴ Badenhorst 'The Delphic Provisions' *Hogen Lovells* 30 March 2017.

²³⁵ Badenhorst 'The Delphic Provisions' *Hogen Lovells* 30 March 2017.

²³⁶ *Mineral Sands Resources v Magistrate* para 90.

²³⁷ *Mineral Sands Resources v Magistrate* para 27.

²³⁸ *Mineral Sands Resources v Magistrate* para 90.

²³⁹ *Mineral Sands Resources v Magistrate* para 90.

only to environmental authorisations, but to all NEMA provisions governing mining activities.²⁴⁰ Essentially, the DMRE is responsible for implementing all NEMA provisions relating to mining.²⁴¹ The court adopted this approach to avoid the polarised enforcement of environmental legislation by both the DMRE and DEFF.²⁴² The effect of this judgment is that the DMRE is the sole authority for enforcing compliance with all NEMA provisions which directly link to mining and prospecting.²⁴³

The court declined to rule on the legality of the activities conducted at the Tormin mine because the main issue was the allocation of powers between the DEFF and DMRE in terms of the One Environmental System.²⁴⁴ When the DEFF had applied to the Magistrate's Court for the search and seizure warrant, it failed to disclose that as from 8 December 2014, the DMRE had become the competent authority for enforcing environmental laws at mines.²⁴⁵ The warrant was set aside on grounds that the DEFF failed to disclose the changes that were introduced by the One Environmental System to the Magistrate's Court.²⁴⁶

5 Assessment of the One Environmental System

To assess the efficacy of the One Environmental System, Parliament's Portfolio Committee on the Environment, Forestry and Fisheries convened a colloquium on the One Environmental System in 2018.²⁴⁷ The various stakeholders that participated included the DEFF, the DMRE, provincial and local government, mining investors, civil society and academics.²⁴⁸ The sentiment shared by an overwhelming majority of the stakeholders is that "the One Environmental System is not working" as initially intended.²⁴⁹ In essence, the regulatory framework is not being effectively regulated and enforced.²⁵⁰

²⁴⁰ *Mineral Sands Resources v Magistrate* para 90.

²⁴¹ *Mineral Sands Resources v Magistrate* para 90.

²⁴² *Mineral Sands Resources v Magistrate* para 90.

²⁴³ *Mineral Sands Resources v Magistrate* para 90; Badenhorst 'The Delphic Provisions' *Hogen Lovells* 30 March 2017.

²⁴⁴ *Mineral Sands Resources v Magistrate* para 1 & 91.

²⁴⁵ *Mineral Sands Resources v Magistrate* para 107.

²⁴⁶ *Mineral Sands Resources v Magistrate* para 107.

²⁴⁷ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018 available at <https://pmsg.org.za/committee-meeting/27570/>, accessed 28 March 2019; Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System*.

²⁴⁸ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System 2*.

²⁴⁹ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

²⁵⁰ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

The One Environmental system has failed to achieve its primary goal of streamlining the environmental regulation of mining operations for a number of reasons.²⁵¹ The overarching challenge has been the lack of cooperative governance between the departments tasked with the regulation and enforcement of the system.²⁵² The DEFF, DMRE and DHWS have not been working together to ensure the success of the One Environmental System.²⁵³ Identifying shortfalls and devising solutions for the efficacy of the system has been challenging given that there has been little transparency on the enforcement, monitoring and reporting of targets and outcomes.²⁵⁴ The discussion below considers the challenges that plague the One Environmental System as identified by the aforementioned stakeholders at the Colloquium.

5.1 Mining Investors

Despite government's efforts to improve the environmental regulation of mining through the One Environmental System, mining investors still perceive the legislative framework to be convoluted and a "nightmare" to comply with.²⁵⁵ Mining Investors, represented by the Minerals Council of South Africa and attorneys at the colloquium, argued that the system is not working because the legislative framework has not been completed.²⁵⁶ For instance, the regulations relating to financial provision for rehabilitation of mines were published in 2015, but left out of the amendments published in 2018.²⁵⁷ These regulations determine the amount payable by a right holder for the rehabilitation of its mine should there be an unexpected closure.²⁵⁸ The effect of the delays in finalising the regulations for the One Environmental System has been a legislative framework riddled with uncertainties and contradictions.²⁵⁹ The finalisation of the 2019 proposed regulations must be prioritised by the DEFF, because right holders currently

²⁵¹ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System 2*.

²⁵² Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

²⁵³ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System 1*.

²⁵⁴ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* (2019) unpublished parliamentary document presented to the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 19 November 2018 (copy on file with author) 1.

²⁵⁵ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System 2*.

²⁵⁶ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

²⁵⁷ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018

²⁵⁸ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System 3*.

²⁵⁹ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

have the outdated 2015 regulations to consult regarding the financial provision for rehabilitation.²⁶⁰

A further criticism of the One Environmental System relates to the inconsistent enforcement by the DMRE.²⁶¹ The Minerals Council argues that there are discrepancies in the enforcement of the legislative framework in different regions in South Africa.²⁶² The practical application of the legislation depends on whether the mining rights and environmental authorisations were applied for and granted before or after the One Environmental System came into effect.²⁶³ The result of the inconsistent application of the law has been confusion.²⁶⁴ *Mineral Sands Resources v Magistrate* is of limited use because of the specific set of circumstances and complexities that attach to each matter.²⁶⁵ The legal uncertainty had led investors to argue that there are problems with how the legislative framework is perceived, interpreted and applied.²⁶⁶ The delays in finalising the legislation combined with the transitional challenges have led to a system that is not fully effective or implementable.²⁶⁷

5.2 Civil Society

Environmental lobby groups and critics concur that the One Environmental System is not working.²⁶⁸ Their reason for this finding is that the legislative framework has been riddled with weak, inconsistent or a lack of enforcement since its inception.²⁶⁹ The lack of enforcement of environmental laws in the minerals industry pre-dates the One Environmental System.²⁷⁰ The literature highlighting this lack of enforcement reveals the negative impact of mining on the

²⁶⁰ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 3.

²⁶¹ South African Human Rights Commission *National Hearings* 44.

²⁶² Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 2.

²⁶³ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 3.

²⁶⁴ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

²⁶⁵ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 3.

²⁶⁶ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

²⁶⁷ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 3.

²⁶⁸ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at XIII; K Forrest & L Loate 'Coal, Water and Mining Flowing Badly' *Society, Work & Development Institute* June 2017 available at https://www.fes-southafrica.org/fileadmin/user_upload/coal_water_and_minig_flowng_badly.pdf, accessed 23 February 2018; South African Human Rights Commission *National Hearings* 44.

²⁶⁹ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at XIII.

²⁷⁰ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 19.

environment through acid mine drainage, air pollution and soil contamination.²⁷¹ Such “legacy issues” of careless mining and non-enforcement in past decades may increase the negative impacts of mining in the present if enforcement efforts are not improved.²⁷²

Critics had anticipated a lack of enforcement of the One Environmental System even before it came into effect.²⁷³ The contention remains that a conflict of interest is inherent in allocating the power to enforce environmental laws with the DMRE, a department mandated to promote minerals extraction.²⁷⁴ This allocation of power is said to be tantamount to the “lion protecting the lamb”.²⁷⁵ This argument stems from the fact that the DMRE performs the dual role of promoter of mineral development and protector of the environment.²⁷⁶ The fatal flaw in this allocation of powers is arguably that there is a conflict of interest in consigning the environmental oversight function to a department mandated to promote minerals extraction.²⁷⁷ Furthermore, environmental lobby groups argue that the environmental management of mining operations will be compromised because the DMRE lacks the expertise to enforce compliance with environmental law.²⁷⁸

Arguments against the allocation of power in the One Environmental System are supported by the fact that the DEFF and DMRE carry dissimilar powers and political weight.²⁷⁹ On the one hand, the DMRE’s role and mission is to contribute towards transformation, growth and development by promoting and regulating the minerals and mining sector.²⁸⁰ The focus is on contributing to development through mineral resources exploitation. The DMRE’s enforcement efforts have not however prioritised environmental sustainability.²⁸¹ The benefits of sustainability that the DMRE focuses on are more from an economic rather than environmental perspective and these are often deemed to be “diametrically opposed versions

²⁷¹ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 29.

²⁷² Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System 4*.

²⁷³ Yield ‘GroundUp: Critical Court Shutdown on Mining and Environment’ *Daily Maverick* 19 February 2017.

²⁷⁴ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at XIII.

²⁷⁵ Yield ‘GroundUp: Critical Court Shutdown on Mining and Environment’ *Daily Maverick* 19 February 2017.

²⁷⁶ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at XIII.

²⁷⁷ T Davies & M Fourie ‘Conflict of Interest in Monitoring Green Laws’ *Business Live* 30 March 2017 available at <https://www.businesslive.co.za/bd/opinion/2017-03-30-conflict-of-interest-in-monitoring-green-laws/> accessed on 16 April 2017.

²⁷⁸ Davies & Fourie ‘Conflict of Interest in Monitoring Green Laws’ *Business Live* 30 March 2017.

²⁷⁹ Ashton (2017) *Conversation around Transparency and Accountability in South Africa’s Extractive Sector* 16.

²⁸⁰ Ashton (2017) *Conversation around Transparency and Accountability in South Africa’s Extractive Sector* 16.

²⁸¹ Ashton (2017) *Conversation around Transparency and Accountability in South Africa’s Extractive Sector* 16.

of sustainability.”²⁸² This argument is not outlandish given that the DMRE is a part of the economic cluster of government, along with the Department of Trade, Industry and Competition.²⁸³ This strategic position of the DMRE allows it to engage with powerful corporate and political players.²⁸⁴

The DEFF, on the other hand, is tasked with environmental management and focuses on honouring the constitutional obligation to meet the “triple bottom line”.²⁸⁵ This is not to say that the DMRE does not have this obligation.²⁸⁶ The “triple bottom line” entails balancing the protection of the environment with social and economic aspects of development to promote sustainable development.²⁸⁷ The economic cluster and free-market supporters view this variety of sustainable development as a restriction on economic growth.²⁸⁸ This stance has given rise to tensions between the economic cluster and the DEFF.²⁸⁹ The tension has led to the DEFF being treated as the “orphan department” in that it is denied similar access to economic or political leverage as the DMRE.²⁹⁰

Despite the criticism, the laws relating to mining and the environment have undoubtedly improved since the introduction of the One Environmental System – “they may not be perfect, but they are sound.”²⁹¹ For laws to “work” they must not only be well designed, but also efficiently and effectively enforced.²⁹² In the case of One Environmental System, studies show that enforcement is lacking.²⁹³ The Centre for Environmental Rights levels serious allegations against the DMRE and DHWS in its report on the regulatory framework.²⁹⁴ The DMRE is said to have failed to enforce laws by granting mining rights to companies already in violation of

²⁸² Ashton (2017) *Conversation around Transparency and Accountability in South Africa’s Extractive Sector* 16.

²⁸³ Ashton (2017) *Conversation around Transparency and Accountability in South Africa’s Extractive Sector* 16.

²⁸⁴ Ashton (2017) *Conversation around Transparency and Accountability in South Africa’s Extractive Sector* 16.

²⁸⁵ The triple bottom line is set out in Section 24(b)(iii) of the Constitution of the Republic of South Africa, 1996. It entails securing the environment while promoting justifiable economic and social development. Glenn Ashton ‘An example of the impacts of adopting the ‘One Environmental System’ of mining governance: some lessons in environmental governance from MRC’s Tormin mine’ 2017 *Conversation around Transparency and Accountability in South Africa’s Extractive Sector* 17.

²⁸⁶ Section 24(b)(iii) of the Constitution of the Republic of South Africa, 1996.

²⁸⁷ Section 24(b)(iii) of the Constitution of the Republic of South Africa, 1996.

²⁸⁸ Ashton (2017) *Conversation around Transparency and Accountability in South Africa’s Extractive Sector* 17.

²⁸⁹ Ashton (2017) *Conversation around Transparency and Accountability in South Africa’s Extractive Sector* 17.

²⁹⁰ Ashton (2017) *Conversation around Transparency and Accountability in South Africa’s Extractive Sector* 17.

²⁹¹ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 19; Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 4.

²⁹² N Gunningham ‘Enforcing Environmental Regulation’ (2011) 23 *Journal of Environmental Law* 170.

²⁹³ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 1; Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 70.

²⁹⁴ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 19 – 35.

the MPRDA.²⁹⁵ The DHWS allegedly allowed many mines to use and discharge polluted water without water use licences.²⁹⁶ The report containing these assertions proved useful for Parliament in assessing the viability of the One Environmental System and the performance of the DMRE and DHWS.²⁹⁷

According to the South African Human Rights Commission, inconsistent enforcement is compounded by limited oversight due to a lack of monitoring and reporting.²⁹⁸ Monitoring the targets and outcomes of the One Environmental System has been challenging, given that there is no transparency in reporting by the competent authorities.²⁹⁹ The DMRE's annual performance plans and presentations to Parliament have not outlined the statistics relating to its targets and outcomes.³⁰⁰ The targets and outcomes need to be clearly defined for stakeholders to make informed and factually-based judgments on the progress, or lack thereof, of the One Environmental System.³⁰¹

The lack of enforcement of the One Environmental System is also highlighted in a study by the Society, Work and Development Institute.³⁰² Its report evidences many mines transgressing water laws without any serious consequences.³⁰³ Numerous mines are found to be illegally operating in ecologically sensitive areas while others are operating without water use licences, because the DHWS lacks the capacity to ensure enforcement.³⁰⁴ The reason the DHWS lacks the capacity to administer the granting of water use licences effectively is attributed to the overwhelming number of mining rights and environmental authorisations issued by the DMRE.³⁰⁵

²⁹⁵ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 32.

²⁹⁶ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 35.

²⁹⁷ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 4.

²⁹⁸ South African Human Rights Commission *National Hearings* 45; Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 3.

²⁹⁹ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 4.

³⁰⁰ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³⁰¹ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 4.

³⁰² Forrest & Loate 'Coal, Water and Mining Flowing Badly' *Society, Work & Development Institute* June 2017.

³⁰³ Forrest & Loate 'Coal, Water and Mining Flowing Badly' *Society, Work & Development Institute* June 2017 at 2.

³⁰⁴ Forrest & Loate 'Coal, Water and Mining Flowing Badly' *Society, Work & Development Institute* June 2017 at 11.

³⁰⁵ Forrest & Loate 'Coal, Water and Mining Flowing Badly' *Society, Work & Development Institute* June 2017 at 30.

The shortfalls of the One Environmental System reflect a breakdown in cooperative governance between the DEFF, DMRE and DHWS.³⁰⁶ Recommendations on how each competent authority can foster cooperative governance thereby improving the efficacy of the One Environmental System are discussed in chapter five of this research.

5.3 Provincial and Local Government

The provincial and local authorities of the DEFF have expressed that they are sidelined by the national DEFF, DMRE and DHWS in respect of the One Environmental System.³⁰⁷ For instance, there is no provision restricting the DMRE from considering an application for a mining prospecting right in an area that is zoned by a province for agriculture or conservation as the primary land use.³⁰⁸ The province must be informed of the application and may comment that mining is not the primary land use.³⁰⁹ However, the DMRE need not consider the advice of the province.³¹⁰ This anomaly in the legislative framework hampers effective cooperation between these key decision-makers in government and creates legal uncertainty.³¹¹ The lack of cooperation between national and provincial departments was the subject of *Mineral Sands Resources v Magistrate*, which shows a lack of cooperation between the DMRE's national department and the Western Cape provincial environmental authorities.³¹²

Municipalities criticise the One Environmental System for restricting local government from implementing environmental laws.³¹³ Furthermore, the regulatory framework is said to give preference to mining over other industries.³¹⁴ For instance, environmental matters are a shared competence under the Constitution between national, provincial and local government.³¹⁵ This means that all three spheres of government are empowered to implement environmental laws.³¹⁶ However, the One Environmental System has separated environmental matters in the

³⁰⁶ Forrest & Loate 'Coal, Water and Mining Flowing Badly' *Society, Work & Development Institute* June 2017 at 2.

³⁰⁷ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 7.

³⁰⁸ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³⁰⁹ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³¹⁰ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³¹¹ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 7.

³¹² Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 7; Chapter 2, part 4 of this dissertation discusses *Mineral Sands Resources v Magistrate*.

³¹³ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³¹⁴ South African Human Rights Commission *National Hearings* 45.

³¹⁵ Schedule 4, Part A of the Constitution of the Republic of South Africa, 1996.

³¹⁶ Schedule 4, Part A of the Constitution of the Republic of South Africa, 1996.

context of mining from general environmental matters.³¹⁷ Resultantly, municipalities are excluded from implementing environmental matters in the context of mining.³¹⁸ Therefore, municipalities have limited access to conduct inspections and to investigate activities regulated by the One Environmental System.³¹⁹

5.4 Department of Environment, Forestry and Fisheries

The DEFF has cited a lack of cooperation from the DMRE as a major shortcoming of the One Environmental System.³²⁰ Initially, when the legislative framework was negotiated, there was cooperation between the departments, however the DEFF observes that the cooperation ebbed away after the framework was introduced.³²¹ For instance, scheduled meetings were not honoured.³²²

Cooperation between the departments continues to be undermined because the departments' databases for environmental authorisation have not been linked.³²³ The DEFF has argued that the DMRE has failed to share the information available on its South African Mineral Resources Administration Database (SAMRAD).³²⁴ The result is that the DEFF's database for environmental authorisations provides information for all sectors, except for mining, since SAMRAD is insulated in the DMRE.³²⁵ The fact that the DMRE is unable to transfer its SAMRAD information into the DEFF's system is a significant problem for monitoring and evaluation.³²⁶ Surely the processes for monitoring the environment for all industries should be aligned if the intent is to have a single environmental system.³²⁷

³¹⁷ South African Human Rights Commission *National Hearings* 45.

³¹⁸ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³¹⁹ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 8.

³²⁰ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³²¹ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³²² Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 8.

³²³ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³²⁴ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 8.

³²⁵ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 8.

³²⁶ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 9.

³²⁷ South African Human Rights Commission *National Hearings* 45.

5.5 Department of Mineral Resources and Energy

The DMRE agrees that cooperation is lacking between it and the DEFF, but argues that it is the DEFF that has stifled the success of the One Environmental System.³²⁸ The lack of cooperation is said to stem from the DEFF's inability to finalise the governing legislation and regulations.³²⁹ For instance, the DEFF has allegedly failed to consult with the DMRE regarding the changes it has made to NEMA, which has been amended almost annually.³³⁰ Resultantly, inconsistent timeframes have been set in the mining and environmental legislation.³³¹ For instance, the delays caused by the DEFF in finalising the regulations for financial provision have frustrated the process of implementing the One Environmental System for the DMRE.³³² The DMRE has expressed that mining companies need a regulatory framework that is certain and predictable over time.³³³ Furthermore, the constant amendment of NEMA adds to the complexity of enforcement.³³⁴

Regarding its own inability to provide the DEFF with the information on SAMRAD, the DMRE cited financial problems as the reason.³³⁵ The lack of funds to create an integrated electronic system has meant that the upgrade will be spread incrementally over several years.³³⁶ The DMRE has expressed that it is unable to integrate the individual records that it has captured on each mine into the DEFF system.³³⁷ The reason given is that the data has to be transferred manually and it is not feasible to re-enter the data for each mine into the DEFF's monitoring system.³³⁸

5.6 Parliament

Parliament, which is tasked with holding departments accountable, has expressed its disappointment in the regulation and more so the enforcement of the One Environmental

³²⁸ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³²⁹ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³³⁰ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 9.

³³¹ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 9.

³³² Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 10.

³³³ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 9.

³³⁴ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³³⁵ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³³⁶ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³³⁷ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 10.

³³⁸ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 10.

System.³³⁹ The underlying problem is said to be the ongoing weakness in inter-departmental relationships.³⁴⁰ Cooperative governance in the environmental regulation of mining arguably has more points of weakness than strength.³⁴¹

With regards to regulation, Parliament has echoed the sentiments of the DMRE that the DEFF needs to finalise the legislation and regulations governing the One Environmental System to create legal certainty.³⁴² Other than that, the DEFF is recorded to be performing better in regulation than the DMRE has been performing in fulfilling its enforcement responsibilities.³⁴³ Evaluating the DMRE's enforcement of the One Environmental System has been a challenge for Parliament because the DMRE has failed in its legal duty to produce reports of its implementation targets and outcomes timeously.³⁴⁴ The failure to be transparent and to provide reports of its progress has hampered the success of the One Environmental System.³⁴⁵

With regards to enforcement, NEMA requires that the DMRE produce two reports on its implementation targets and outcomes respectively.³⁴⁶ These reports should provide detailed insights into how the DMRE is managing environmental issues relating to mining.³⁴⁷ The first of these key monitoring instruments is known as the Departmental Environmental Management Plan (management plan).³⁴⁸ This document should report on the implementation targets and practical steps to implement the One Environmental System.³⁴⁹ The second report is known as the Annual Review on the Implementation of the Department Environmental Management Plan

³³⁹ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4; Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 9-10.

³⁴⁰ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³⁴¹ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³⁴² Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

³⁴³ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 9.

³⁴⁴ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 1.

³⁴⁵ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁴⁶ Section 11 NEMA.

³⁴⁷ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 2.

³⁴⁸ Section 15(5) NEMA.

³⁴⁹ National Environmental Management Act 107 of 1998: Environmental Management Plan – GG 42010 GN 1192 of 02 November 2018 at 14.

(annual review).³⁵⁰ This document should report on the outcomes of implementation by providing an assessment of the management plan.³⁵¹

On assessment of the management plan and annual review, Parliament expressed disappointment in the weak quality of the reports produced by the DMRE.³⁵² Parliament found the reports to be of extremely limited usefulness for oversight and accountability purposes.³⁵³

The management plan is underwhelming, because a great deal of the information contained in it is generic.³⁵⁴ It repeats the content of the law and policy intentions rather than outlining actual plans. Significant parts of the management plan are outdated.³⁵⁵ For instance, many targets set by the DMRE in 2014 in its 2014 – 2019 strategic plan have been significantly revised in subsequent annual reports, yet the 2018 management plan records the old targets without comment.³⁵⁶

Chapter eight of the management plan is said to be the most disappointing part of the report.³⁵⁷ This chapter should recommend ways in which the DMRE can promote the implementation of the One Environmental System.³⁵⁸ Two pages in length, it simply outlines the advantages of the One Environmental System without giving any information on how to promote the implementation of the regulatory framework.³⁵⁹ In chapter eight, the DMRE declines to consider any lessons learnt in the first three years of the One Environmental System's operation by stating that "it is too early for [it] to provide the extent of compliance with the new regime."³⁶⁰

³⁵⁰ Section 16(1)(b) NEMA. The DMRE has not made this document available on a public platform, however an analysis of the document is available in Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining*.

³⁵¹ Section 16(1)(b) NEMA.

³⁵² Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁵³ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 3.

³⁵⁴ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁵⁵ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁵⁶ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁵⁷ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁵⁸ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁵⁹ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁶⁰ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

The annual review leaves much to be desired. By the end of 2018, the 2017/2018 report was not published, therefore Parliament had to assess the report for the 2016/2017 financial year.³⁶¹ The report is template driven and largely sets out the requirements of the law, rather than assessing the implementation of the One Environmental System from the perspective of mining inspectors.³⁶²

The impression created is that the management plan and annual review were generated simply to comply with the law, rather than to promote a strategy to implement the One Environmental System.³⁶³ Parliament considers these reports to be “entirely inadequate” as an assessment of the implementation targets and outcomes of the One Environmental System.³⁶⁴

6 Conclusion

This chapter gives a breakdown of the regulatory framework of the One Environmental System.³⁶⁵ The regulatory framework was introduced to streamline the environmental regulation of mining.³⁶⁶ The most significant aspect of the regulatory framework is the allocation of powers to the competent authorities.³⁶⁷ In short, the DMRE is tasked with issuing mining-related environmental authorisations and enforcing environmental laws in the minerals extraction industry.³⁶⁸ The DEFF sets the regulatory framework and is the appeal authority for decisions taken by the DMRE.³⁶⁹ Finally, the DHWS is responsible for regulating and enforcing the National Water Act.³⁷⁰

Although introducing the One Environmental System has improved the regulation of the environment in relation to mining, its regulation and more so enforcement have received more

³⁶¹ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 3.

³⁶² Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 3.

³⁶³ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁶⁴ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁶⁵ Section 50A NEMA; *Mineral Sands Resources v Magistrate* para 42.

³⁶⁶ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at XIII.

³⁶⁷ South African Human Rights Commission *National Hearings* 44.

³⁶⁸ Section 50A(2)(b) NEMA.

³⁶⁹ Section 50A(2)(b)-(c) NEMA.

³⁷⁰ Section 50A(2)(d) NEMA.

criticism than praise.³⁷¹ An assessment of the One Environmental System shows that it has not achieved its intended purpose of streamlining the environmental regulation of mining.³⁷²

The One Environmental System is “not working” because it is not being effectively regulated and enforced.³⁷³ The shortcomings identified in the DHWS relate to weak enforcement, which has been attributed to capacity constraints.³⁷⁴ The DEFF has hampered the effective regulation of the One Environmental System by delaying the finalisation of the regulatory framework.³⁷⁵ The DMRE has received the most criticism for dereliction of its duties as the enforcement authority.³⁷⁶

When the One Environmental System was introduced, the regulatory framework was criticised for the conflict of interest inherent in allocating the power to enforce environmental laws with the DMRE, a department mandated to promote minerals extraction.³⁷⁷ As such, the DMRE is said to be inappropriate an authority for environmental enforcement.³⁷⁸ Further criticism levelled against the DMRE relates to its inconsistent enforcement of the regulatory framework.³⁷⁹ Lastly, the DMRE has hampered a proper assessment of the One Environmental System and its enforcement efforts by failing in its legal duty to produce reports of its implementation targets and outcomes.³⁸⁰

In addition to the failure by the three competent authorities to honour their individual duties, there have been ongoing weakness in the inter-departmental relationships.³⁸¹ Cooperative governance in the environmental regulation of mining arguably has more points of weakness

³⁷¹ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 19; Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 4.

³⁷² Parliamentary Monitoring Group ‘One Environmental System Colloquium’ 20 November 2018.

³⁷³ Parliamentary Monitoring Group ‘One Environmental System Colloquium’ 20 November 2018.

³⁷⁴ Forrest & Loate ‘Coal, Water and Mining Flowing Badly’ *Society, Work & Development Institute* June 2017 at 11.

³⁷⁵ Parliamentary Monitoring Group ‘One Environmental System Colloquium’ 20 November 2018.

³⁷⁶ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁷⁷ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at XIII.

³⁷⁸ South African Human Rights Commission *National Hearings* 45.

³⁷⁹ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

³⁸⁰ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 1.

³⁸¹ South African Human Rights Commission *National Hearings* 44.

than strength.³⁸² The lack of intragovernmental cooperation extends to provincial and local government.³⁸³

The discussion above shows that, although the regulatory framework for the One Environmental System has areas of improvement, the major shortcoming lay in the enforcement of the regulatory framework.³⁸⁴ Therefore, this research proceeds with a discussion and recommendations on the enforcement, rather than regulation, of the One Environmental System. The following chapter sets out the theoretical framework for compliance and enforcement in relation to the One Environmental System.

Chapter 3:

Theories of Compliance and Enforcement in Relation to the One Environmental System

1 Introduction

The central focus of this research is on how the One Environmental System can be effectively enforced to achieve compliance with its provisions. In investigating this inquiry, this chapter sets out the theories of compliance and enforcement.

Compliance refers to the state of regulated persons acting in accordance with prescribed behaviour.³⁸⁵ Prescriptions of behaviour come in different forms and require varying enforcement.³⁸⁶ Prescribed behaviour can be determined voluntarily by consenting parties through an agreement or contract.³⁸⁷ If either party to a contract fails to act, compliance may

³⁸² Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 1.

³⁸³ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 5.

³⁸⁴ South African Human Rights Commission *National Hearings* 45; Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 1; Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 70.

³⁸⁵ GJ Stigler 'The Optimum Enforcement of Laws' in GS Becker & WM Landes (eds) *Essays in the Economics of Crime and Punishment* (1974) 55.

³⁸⁶ Stigler 'The Optimum Enforcement of Laws' in *Essays in the Economics of Crime and Punishment* 55.

³⁸⁷ R Sharrock *Business Transactions Law* 9 ed (2016) 55.

be secured through legal action.³⁸⁸ When the prescribed behaviour is determined unilaterally by the government, rather than by individual agreement, it is called the law or regulations.³⁸⁹

The government secures compliance by enforcing its laws.³⁹⁰ Enforcement denotes the actions taken by governmental authorities to secure compliance from regulated persons.³⁹¹

Compliance and enforcement can be conceptualised in different ways.³⁹² This chapter conceptualises compliance and enforcement using the rationalist theory and the normative theory of behavioural motivations.³⁹³

From a compliance perspective, the rationalist theory posits that regulated persons prioritise economic self-interest.³⁹⁴ Based on that priority, regulated persons conduct a cost-benefit analysis to determine whether to comply with the law.³⁹⁵ Enforcement authorities who view regulated persons as rational actors use a coercive approach to induce compliance.³⁹⁶ Under the normative theory, regulated persons are law-abiding citizens that have high regard for legitimate laws, but struggle to comply when laws are complex.³⁹⁷ Enforcement authorities who view regulated persons as normative actors use a cooperative approach to induce compliance.³⁹⁸

³⁸⁸ R Sharrock *Business Transactions Law* 9 ed (2016) 754.

³⁸⁹ J Braithwaite 'Rules and Principles: A theory of Legal Certainty' (2002) 27 *Australian Journal of Legal Philosophy* 47; Stigler 'The Optimum Enforcement of Laws' in *Essays in the Economics of Crime and Punishment* 55.

³⁹⁰ M Kidd *Environmental Law* 2 ed (2011) 266.

³⁹¹ F Craigie, P Snijman & M Fourie 'Dissecting Environmental Compliance and Enforcement' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 44.

³⁹² J Etienne 'Compliance Theory: A Goal Framing Approach' (2011) 33 *Law and Policy* 307 consolidates different conceptualisations of compliance to create a "consistent and comprehensive compliance theory."

³⁹³ D Zaelke, D Kaniaru & E Kruzikova *Making Law Work: Environmental Compliance and Sustainable Development* vol 1 (2005) 54.

³⁹⁴ K Hawkins *Law as a Last Resort: Prosecution Decision-making in a Regulatory Agency* (2002) 230; C Abbot *Enforcing Pollution Control Regulation Strengthening Sanctions and Improving Deterrence* (2009) 30; J Arlen 'The Potentially Perverse Effects of Corporate Criminal Liability' (1994) 23 *The Journal of Legal Studies* 834.

³⁹⁵ GS Becker 'Crime and Punishment: An Economic Approach' (1968) 76 *Journal of Political Economy* 169; PH Robinson & JM Darley 'Does Criminal Law Deter? A Behavioural Science Investigation' (2004) 24 *Oxford Journal of Legal Studies* 182.

³⁹⁶ RL Glicksman 'Coercive vs. Cooperative Enforcement: Effect of Enforcement Approach on Environmental Management' (2015) 42 *International Review of Law and Economics* 136; C Rechtschaffen 'Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement' (1998) 71 *Southern California Law Review* 1187.

³⁹⁷ TR Tyler *Why People Obey the Law* (1990) 3; TF Malloy 'Regulation, Compliance and the Firm' (2003) 76 *Temple Law Review* 454; Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 44.

³⁹⁸ JT Scholz 'Cooperation, Deterrence and the Ecology of Regulatory Enforcement' (1984) 18 *Law and Society Review* 182.

Using the rationalist and normative theories of compliance and enforcement, this chapter considers whether enforcement authorities in the One Environmental System use a coercive or cooperative approach to enforcement. It also considers the use of a hybrid system that incorporates both the coercive and cooperative approaches to enforcement. After determining which approach is used to enforce the One Environmental System, the chapter concludes by setting out an implementation strategy that is aimed at achieving effective environmental enforcement.

2 Theories of Compliance

Compliance is defined as the ideal situation under which regulated persons obey governing laws.³⁹⁹ Laws are often taken as a means of promoting social stability and legal certainty.⁴⁰⁰ However, without compliance, or at least a general inclination towards compliance, laws become meaningless.⁴⁰¹ The following discussion unpacks possible explanations of why regulated persons comply or fail to comply with laws.⁴⁰² For purposes of this discussion, regulated persons refer to natural and juristic persons that are subject to the provisions of the One Environmental System.⁴⁰³

The conception of compliance is far from universal.⁴⁰⁴ For purposes of this chapter, compliance is the manifestation of behavioural motivations.⁴⁰⁵ Behavioural motivations may be explained under two categories, namely the rationalist theory which falls under “logic of consequences” and the normative theory which follows the “logic of appropriateness.”⁴⁰⁶

³⁹⁹ Craigie, Snijman & Fourie ‘Dissecting Environmental Compliance and Enforcement’ in *Environmental Compliance and Enforcement in South Africa* 41.

⁴⁰⁰ Braithwaite (2002) *Australian Journal of Legal Philosophy* 52.

⁴⁰¹ D Zaelke, M Stilwell & O Young ‘What Reason Demands: Making Law Work for Sustainable Development’ in D Zaelke, D Kaniaru & E Kruzikova (eds) *Making Law Work: Environmental Compliance and Sustainable Development* vol 1 (2005) 45.

⁴⁰² Craigie, Snijman & Fourie ‘Dissecting Environmental Compliance and Enforcement’ in *Environmental Compliance and Enforcement in South Africa* 42.

⁴⁰³ J Heaton *The South African Law of Persons* 5 ed (2017) 3 – 4 defines natural persons as human beings. An association of human beings is legally recognised and called a juristic person. An example of a juristic person is a mining company.

⁴⁰⁴ Etienne (2011) *Law and Policy* 307 consolidates different conceptualisations of compliance to create a “consistent and comprehensive compliance theory.”

⁴⁰⁵ Zaelke, Kaniaru & Kruzikova *Making Law Work* 54.

⁴⁰⁶ JG March & JP Olsen ‘The Institutional Dynamics of International Political Orders’ (1998) 52 *International Organisation* 949; Craigie, Snijman & Fourie ‘Dissecting Environmental Compliance and Enforcement’ in *Environmental Compliance and Enforcement in South Africa* 42

On one hand, the rationalist theory relies on sanctions to avert non-compliance.⁴⁰⁷ Regulated persons under this theory use the “logic of consequences” to choose rationally between options based on their perceived consequences.⁴⁰⁸ On the other hand, the normative theory relies on cooperation from regulated persons to secure compliance.⁴⁰⁹ Regulated persons using the “logic of appropriateness” decide whether to comply with the law based on whether they perceive the legal obligations as appropriate.⁴¹⁰ These two theories are not mutually exclusive, instead they provide a good starting point for a discussion on the concept of compliance.⁴¹¹

2.1 Rationalist Theory of Compliance: Logic of Consequences

The rationalist theory of compliance is based on the notion that regulated persons, be it natural or juristic, are rational actors whose actions reflect a maximisation of economic self-interest.⁴¹² Regulated persons, under this theory, are amoral and less inclined to obey laws.⁴¹³ Put differently, they are “bad apples” that conduct a cost-benefit analysis before acting.⁴¹⁴ Regulated persons comply with the law only if the cost of non-compliance outweighs the benefits of non-compliance.⁴¹⁵ The benefits include monetary gain, while costs are deemed to be more than just monetary detriment.⁴¹⁶ Costs, in this context, refer to “extra-legal punishments” such as moral stigma and a tainted reputation.⁴¹⁷ Non-compliance therefore occurs when the perceived benefits of transgression outweigh the anticipated cost of punishment should the non-compliance be detected.⁴¹⁸ This logic generally leads to the use of traditional enforcement techniques such as widespread monitoring and inspection by the

⁴⁰⁷ MA Cohen ‘Empirical Research on the Deterrent Effect of Environmental Monitoring and Enforcement’ (2000) 30 *The Environmental Law Reporter* 10245.

⁴⁰⁸ March & Olsen (1998) *International Organisation* 949.

⁴⁰⁹ Abbot *Enforcing Pollution Control Regulation* 42.

⁴¹⁰ March & Olsen (1998) *International Organisation* 951.

⁴¹¹ RA Kagan & JT Scholz ‘The “Criminology of the Corporation” and Regulatory Enforcement Strategies’ in K Hawkins & JM Thomas (eds) *Enforcing Regulations* (1984) 68; K Hawkins ‘Compliance Strategy, Prosecution Policy, and Aunt Sally – A Comment on Pearce and Tombs’ (1990) 30 *The British Journal of Criminology* 453; Zaelke, Kaniaru & Kruzikova *Making Law Work* 55; K Hawkin ‘Enforcing Regulation More of the Same from Pearce and Tombs’ (1991) 31 *The British Journal of Criminology* 428.

⁴¹² HA Simon *Models of Bounded Rationality: Behavioural Economics and Business Organisation* (1982) 291; DM Kreps *A Course in Microeconomic Theory* (1990) 724; E Sutherland *White-Collar Crime: The Uncut Version* (1983) 236.

⁴¹³ E Bardach & RA Kagan *Going by the Book: The Problem of Regulatory Unreasonableness* (1982) 65.

⁴¹⁴ Becker (1968) *Journal of Political Economy* 169.

⁴¹⁵ Abbot *Enforcing Pollution Control Regulation* 20.

⁴¹⁶ I Ayres & J Braithwaite *Responsive Regulation: Transcending the Deregulation Debate* (1992) 35; HG Grasmick & RJ Bursik ‘Conscience, Significant Other and rational Choice: Extending the Deterrence Model’ (1990) 24 *Law and Society Review* 841.

⁴¹⁷ Grasmick & Bursik (1990) *Law and Society Review* 841.

⁴¹⁸ DB Spence ‘The Shadow of the Rational Polluter: Rethinking the Role of Rational Actor Models in Environmental Law’ (2001) 89 *California Law Review* 920.

government and sanctions for non-compliance.⁴¹⁹ The rationalist theory is often supported by other complimenting theories that are discussed below.⁴²⁰

For a better understanding of the rationalist theory, Becker provides compelling insights from a criminal law perspective.⁴²¹ He posits that a potential offender would decide (to commit a crime) based on how likely it is that he will be caught, and how severely he will be punished.⁴²² Based on this finding, Becker recommends intensifying penalties and amplifying monitoring for the sake of detecting crimes more readily and increasing the likelihood of conviction.⁴²³

Further to Becker's model is the deterrence theory of non-compliance.⁴²⁴ The deterrence theory has three tenets.⁴²⁵ Firstly, there must be a high probability of detecting non-compliance. Secondly, detection must be followed by prompt, certain and fitting sanctions.⁴²⁶ Lastly, there must be a general perception among the regulated persons that the detection and sanctions exist.⁴²⁷ The increase in the enforcement authority of the One Environmental System can be attributed to the goal of deterring non-compliance with the system's provisions. In addition to environmental management inspectors, environmental mineral resource inspectors were established to intensify enforcement of the One Environmental System.⁴²⁸ A larger enforcement authority increases the probability of detecting non-compliance and imposing sanctions for violations thereby increasing the perception by regulated persons that violations will be detected and prosecuted.

Behavioural-decision theory is another theory that is worthy of mention.⁴²⁹ This theory holds that compliance behaviour is influenced by how regulated persons prefer laws to be described.⁴³⁰ An important influencing factor is how a certain choice is phrased by the

⁴¹⁹ Malloy (2003) *Temple Law Review* 453;

⁴²⁰ Zaelke, Kaniaru & Kruzikova *Making Law Work* 59.

⁴²¹ Becker (1968) *Journal of Political Economy* 169.

⁴²² Becker (1968) *Journal of Political Economy* 208

⁴²³ Becker (1968) *Journal of Political Economy* 208.

⁴²⁴ Zaelke, Kaniaru & Kruzikova *Making Law Work* 59.

⁴²⁵ C Rechtschaffen & DL Markell *Reinventing Environmental Enforcement and the State/Federal Relationship* (2003) 60 – 61.

⁴²⁶ Rechtschaffen & Markell *Reinventing Environmental Enforcement* 61.

⁴²⁷ Rechtschaffen & Markell *Reinventing Environmental Enforcement* 61.

⁴²⁸ section 31BB of the National Environmental Management Act 107 of 1998.

⁴²⁹ JT Casey & JT Scholz 'Beyond Deterrence: Behavioural Decision Theory and Tax Compliance' (1991) 25 *Law and Society Review* 821 – 844.

⁴³⁰ Casey & Scholz (1991) *Law and Society Review* 821.

regulating authority.⁴³¹ For example, a person's decision may differ when a choice is phrased as the number of lives that will be saved, as opposed to the number of lives that will be lost.⁴³²

Under behavioural decision-theory, another factor that may influence the making of compliance decisions is how the prospects of detection, prosecution and sanction are described in the legislation.⁴³³ For instance, a person's choice may differ when the relevant legislation sets out the probabilities of detection, prosecution and punishment for each stage in a series of events as opposed to when the cumulative probabilities are set out.⁴³⁴ The National Environmental Management Act 107 of 1998 does a good job of sequentially setting out the consequences of non-compliance.⁴³⁵ Section 31K starts by mentioning that inspectors may conduct routine inspections to determine whether regulated persons are abiding by the laws.⁴³⁶ If a violation is detected during the inspection, a compliance notice may be issued to the regulated person.⁴³⁷ The regulated person has an opportunity to object to a compliance notice.⁴³⁸ If the objection fails and the regulated person does not fulfil the conditions of the compliance notice, he risks having his permit or licence revoked.⁴³⁹

2.2 Normative Theory of Compliance: Logic of Appropriateness

By contrast, the normative model views regulated persons as “good apples” or law-abiding actors that want to obey the law, but struggle, in good faith, to comply for a number of reasons.⁴⁴⁰ The reasons include complicated and contradictory laws, “a lack of awareness or expertise, a shortage of resources or the absence of appropriate incentives.”⁴⁴¹ These are some of the reasons that were advanced by mining companies that are subject to the country's laws because of their investment in South Africa's mining industry.⁴⁴² The Minerals Council

⁴³¹ Casey & Scholz (1991) *Law and Society Review* 822.

⁴³² Zaelke, Kaniaru & Kruzikova *Making Law Work* 59.

⁴³³ Casey & Scholz (1991) *Law and Society Review* 822.

⁴³⁴ Zaelke, Kaniaru & Kruzikova *Making Law Work* 60.

⁴³⁵ National Environmental Management Act 107 of 1998 (hereinafter NEMA).

⁴³⁶ Section 31K NEMA.

⁴³⁷ Section 31L NEMA.

⁴³⁸ Section 31M NEMA.

⁴³⁹ Section 31N NEMA.

⁴⁴⁰ Abbot *Enforcing Pollution Control Regulation*; Malloy (2003) *Temple Law Review* 454.

⁴⁴¹ Craigie, Snijman & Fourie ‘Dissecting Environmental Compliance and Enforcement’ in *Environmental Compliance and Enforcement in South Africa* 43.

⁴⁴² Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* (2019) unpublished parliamentary document presented at the Colloquium on the One Environmental System convened by the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 20 November 2018 (copy on file with author) 2; B Naidoo ‘One Environment System to stamp out over-regulation’ available at <http://businessmediamags.co.za/one-environmental-system-to-stamp-out-over-regulation/>, accessed on 03 April 2017.

(formerly known as the Chamber of mines), represents mining companies and reported that the DMRE is enforcing provisions of the One Environmental System inconsistently in different regions.⁴⁴³ The legislation is enforced differently depending on whether the mining right was granted before or after the One Environmental System.⁴⁴⁴

According to the normative theory, when regulated persons comply with the law, it is not because they fear being penalised, but because they have a sense of duty arising from a “social norm.”⁴⁴⁵ According to Malloy, a “social norm” exists where, firstly, there is a sense of obligation by regulated persons to obey the law,⁴⁴⁶ and secondly, the obligation persists even when there are no formal legal sanctions.⁴⁴⁷ Essentially, the normative model depends on the capacity of regulated persons to monitor and control their own behaviour independent of external government sanctions.⁴⁴⁸ Therefore, regulated persons should comply even when enforcement authorities are not monitoring their actions.⁴⁴⁹ What powers the sense of obligation is the belief that “legitimate laws” ought to be followed.⁴⁵⁰ The legitimacy of the laws is determined by whether they have been developed and implemented reasonably and in a procedurally fair way by governmental authorities.⁴⁵¹

There are two circumstances under which non-compliance would occur in a normative community.⁴⁵² The first is known as the complexity critique and the other as the illegitimacy perception.⁴⁵³ Under the complexity critique, regulated persons may deviate from compliance if they find laws to be too great in number, complex, unintelligible, too fluid, constantly changing and too difficult to find.⁴⁵⁴ Supporters of this view maintain that regulated persons

⁴⁴³ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System 2*.

⁴⁴⁴ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System 2*.

⁴⁴⁵ Malloy (2003) *Temple Law Review* 464.

⁴⁴⁶ Malloy (2003) *Temple Law Review* 464; Tyler *Why People Obey the Law* (1990) 25.

⁴⁴⁷ Malloy (2003) *Temple Law Review* 465.

⁴⁴⁸ Malloy (2003) *Temple Law Review* 455.

⁴⁴⁹ Malloy (2003) *Temple Law Review* 455.

⁴⁵⁰ TR Tyler & JM Darley ‘Building a Law-Abiding Society: Taking Public Views about Morality and the Legitimacy of Legal Authorities into Account when Formulating Substantive Law’ (1999) 28 *Hofstra Law Review* 716; Tyler *Why People Obey the Law* (1990) 3-4.

⁴⁵¹ Malloy (2003) *Temple Law Review* 468; For a discussion of the process of passing laws in South Africa see P De Vos & W Freedman *South African Constitutional Law* (2014) 150 – 166 and Parliament of the Republic of South Africa ‘How a law is made’ available at <https://www.parliament.gov.za/how-law-made> accessed on 15 April 2019, Section 33(1) Constitution of the Republic of South Africa 1996; C Hoexter *Administrative Law in South Africa* 2 ed (2012) 253.

⁴⁵² Malloy (2003) *Temple Law Review* 469.

⁴⁵³ Malloy (2003) *Temple Law Review* 469; Zaelke, Kaniaru & Kruzikova *Making Law Work* 60.

⁴⁵⁴ DB Spence (2001) *California Law Review* 931 – 936. There is some truth to the fact that laws are ever-changing. However, for a counter-argument see Malloy (2003) *Temple Law Review* 470 n.73 who notes that changes are implemented at a slow pace and are often preceded by a public participation process.

do not know what “perfect compliance” is, thus cannot attain it.⁴⁵⁵ For instance, small businesses or those acting in good faith would struggle to comply with laws due to the lack of resources to stay abreast with the complex, ever-changing regulatory requirements.⁴⁵⁶ Junior mining investors, for instance, criticise the One Environmental System for complicating the requirements for environmental impact assessments (EIAs).⁴⁵⁷ The EIA process creates hurdles for small companies who cannot afford the high costs associated with conducting scientific studies and engaging in public participation.⁴⁵⁸

As mentioned earlier, the normative model is partly rooted in the belief that governmental authorities and the laws that they enact and enforce are legitimate, thus worthy of obedience.⁴⁵⁹ Therefore, non-compliance becomes a possibility when regulatory authorities and laws are perceived to be illegitimate.⁴⁶⁰ This perception arises when governmental authorities are appointed in a procedurally unfair manner or when authorities impose rigid rules that seem to be unresponsive to the needs of regulated persons.⁴⁶¹ When the perception of illegitimacy manifest, regulated persons are less likely to feel obliged to comply.⁴⁶² In the absence of the normative influence, regulated persons are likely to resort to rationality, complying only if the cost of non-compliance outweighs the benefit of conforming to the “social norm.”⁴⁶³

2.3 Integrating Rationalists and Normative Theories

Both rationalist and normative theories of compliance provide useful insights into behavioural motivations that lead to compliance.⁴⁶⁴ These theories are not mutually exclusive.⁴⁶⁵ Rather, they provide different ways of understanding influences on compliance behaviour.⁴⁶⁶ When regulated persons are deciding whether to comply with laws, both theories prevail to different degrees under different circumstances.⁴⁶⁷

⁴⁵⁵ Spence (2001) *California Law Review* 936; Zaelke, Kaniaru & Kruzikova *Making Law Work* 60.

⁴⁵⁶ Spence (2001) *California Law Review* 973.

⁴⁵⁷ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 6.

⁴⁵⁸ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 6.

⁴⁵⁹ Tyler & Darley (1999) *Hofstra Law Review* 716; Tyler *Why People Obey the Law* (1990) 3-4.

⁴⁶⁰ Malloy (2003) *Temple Law Review* 469.

⁴⁶¹ Malloy (2003) *Temple Law Review* 469.

⁴⁶² Malloy (2003) *Temple Law Review* 469.

⁴⁶³ Malloy (2003) *Temple Law Review* 469; Kagan & Scholz ‘The “Criminology of the Corporation” and Regulatory Enforcement Strategies’ in *Enforcing Regulations* 75.

⁴⁶⁴ Zaelke, Kaniaru & Kruzikova *Making Law Work* 54.

⁴⁶⁵ Zaelke, Kaniaru & Kruzikova *Making Law Work* 62.

⁴⁶⁶ Zaelke, Kaniaru & Kruzikova *Making Law Work* 62.

⁴⁶⁷ Malloy (2003) *Temple Law Review* 456 & 475.

In practice, regulated persons make decisions based on a hybrid logic which is based on both the rationalist and normative theories.⁴⁶⁸ A proper understanding of the behavioural motivations driving compliance requires a balancing of these two theories.⁴⁶⁹ As illustrated below, compliance is influenced by and impacts the enforcement of governing laws.⁴⁷⁰ Therefore, a comprehensive analysis of compliance theories is best given after discussing enforcement theories below.

3 Theories of Enforcement

As already mentioned, compliance refers to the state of regulated persons abiding by the law.⁴⁷¹ Enforcement denotes the actions taken by authorities to secure compliance from regulated persons.⁴⁷² Just as compliance has been explored through the rationalists and normative theories, this section discusses the merits of enforcing compliance through the same theories.⁴⁷³ While enforcers under the rationalist theory use a coercive approach to enforcement, enforcers under the normative theory use a cooperative approach to enforcement.⁴⁷⁴ The discussion that follows focuses on a number of fundamental differences between the coercive and cooperative approach. These differences are set out in the following table:

⁴⁶⁸ Zaelke, Kaniaru & Kruzikova *Making Law Work* 62.

⁴⁶⁹ Zaelke, Kaniaru & Kruzikova *Making Law Work* 62.

⁴⁷⁰ Rechtschaffen (1998) *Southern California Law Review* 1188.

⁴⁷¹ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 41.

⁴⁷² Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 44.

⁴⁷³ Abbot *Enforcing Pollution Control Regulation* 39.

⁴⁷⁴ Abbot *Enforcing Pollution Control Regulation* 39.

DISTINGUISHING FACTOR	RATIONALIST THEORY	NORMATIVE THEORY
Enforcement Approach	Coercive approach	Cooperative approach
Perception of Regulated Persons	Conduct cost-benefit analysis to decide whether to comply	Law-abiding citizens that struggle to comply when laws are complex
Purpose of Enforcement	Deter non-compliance	Encouraging compliance
Enforcement Mechanism	Imposition of sanctions for non-compliance	Providing assistance and incentives to encourage compliance
Implementation of Enforcement	Inflexible uniform enforcement	Flexible ad hoc enforcement
Type of Enforcement	retrospective enforcement	Prospective enforcement

Figure 4: Differences between the rationalist theory and normative theory⁴⁷⁵

The differences in each approach relate to how enforcement authorities view regulated persons; the approach to enforcement; the purpose of enforcement; the enforcement mechanism used to achieve said purpose; how enforcement is implemented; and the type of enforcement. These are further explained in the discussion below.

Over the years, environmental enforcement in South Africa has shifted from a traditional, purely coercive approach to a less combative approach that uses different techniques to secure compliance.⁴⁷⁶ Through the One Environmental System, the regulating authority adopted a more flexible approach to securing compliance by providing for compliance assistance in the legislation.⁴⁷⁷ For instance, the regulations have reduced the number of provisions that need to be complied with to conduct mining activities.⁴⁷⁸ Instead of preparing two environmental

⁴⁷⁵ Summary of Glicksman (2015) *International Review of Law and Economics* 135.

⁴⁷⁶ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 52.

⁴⁷⁷ Section 12(4) NEMA; K Hawkin 'Creating Cases in a Regulatory Agency' (1984) 12 *Urban Life* 387; Glicksman (2015) *International Review of Law and Economics* 135.

⁴⁷⁸ *Mineral Sands Resources (Pty) Ltd v Magistrate for the District of Vredendal, Kroutz NO and Others* (18701/16) [2017] ZAWCHC 25 30.

management programmes, mining companies now only require one.⁴⁷⁹ The reduced compliance burden on mining companies shows that the regulatory framework has been drafted to further encourage compliance.

Despite the adoption of a cooperative approach to enforcement, there is little proof of a complete shift from a coercive to a cooperative approach.⁴⁸⁰ There is a clear dichotomy between the two approaches.⁴⁸¹ Nevertheless, enforcement authorities rarely rely exclusively on one approach.⁴⁸² An assessment of the One Environmental System shows that enforcement authorities use a flexible, hybrid approach that relies on both coercion and cooperation.⁴⁸³ In analysing the theories of enforcement, this chapter formulates a way in which the hybrid approach to enforcement should be implemented to achieve effective environmental enforcement.⁴⁸⁴

3.1 Rationalist Theory of Enforcement: Coercive Approach

Under the rationalist theory, regulated persons prioritise economic self-interest.⁴⁸⁵ They comply with the law only if the cost of non-compliance outweighs the benefits of non-compliance.⁴⁸⁶ The costs of non-compliance include fines and the withdrawal of operating licences, while the benefits of non-compliance include avoiding the operational costs associated with conducting business in accordance with environmental protection laws.⁴⁸⁷

Enforcement authorities who view regulated persons as rational actors use a coercive approach to induce compliance.⁴⁸⁸ The goal of coercion in enforcement is to deter non-compliance.⁴⁸⁹ This goal is achieved by imposing sanctions when there has been a failure to comply with the law.⁴⁹⁰ Essentially, enforcement authorities aim to “make sanctions high enough and the

⁴⁷⁹ Section 12(4) NEMA.

⁴⁸⁰ Glicksman (2015) *International Review of Law and Economics* 135.

⁴⁸¹ Glicksman (2015) *International Review of Law and Economics* 135.

⁴⁸² Glicksman (2015) *International Review of Law and Economics* 135.

⁴⁸³ Craigie, Snijman & Fourie ‘Dissecting Environmental Compliance and Enforcement’ in *Environmental Compliance and Enforcement in South Africa* 52; sections 31K – 31N of NEMA illustrate how the hybrid structure operates. These sections show that when there is a violation, the enforcement authority begins by issuing a notice before resorting to harsher measures like revoking a licence.

⁴⁸⁴ Abbot *Enforcing Pollution Control Regulation* 39; J Braithwaite ‘Reward and Regulation’ (2002) 29 *Journal of Law and Society* 20; Ayres & Braithwaite *Responsive Regulation* 35.

⁴⁸⁵ Hawkins *Law as a Last Resort* 230; Abbot *Enforcing Pollution Control Regulation* 30; Arlen (1994) *The Journal of Legal Studies* 834; Sutherland *White-Collar Crime* 236.

⁴⁸⁶ Abbot *Enforcing Pollution Control Regulation* 41; Rechtschaffen (1998) *Southern California Law Review* 1186.

⁴⁸⁷ Rechtschaffen (1998) *Southern California Law Review* 1186.

⁴⁸⁸ Scholz (1984) *Law and Society Review* 183.

⁴⁸⁹ Glicksman (2015) *International Review of Law and Economics* 136.

⁴⁹⁰ Bardach & Kagan *Going by the Book* 71; Abbot *Enforcing Pollution Control Regulation* 41.

probability of detection great enough so that it becomes economically irrational for regulated persons to disobey the law.”⁴⁹¹ The coercive approach is based on inflexible enforcement that imposes sanctions uniformly for transgressions of the same nature.⁴⁹²

Enforcement authorities view imposing sanctions as a mark of success. Enforcement in this sense is mainly retrospective since its aim is to react to transgressions that have already happened by penalising the transgressor to deter future violations.⁴⁹³

3.2 Normative Theory of Enforcement: Cooperative Approach

Under the normative theory, regulated persons are law-abiding citizens that have high regard for legitimate laws.⁴⁹⁴ As such, they comply with laws, but struggle in good faith to maintain compliance when laws become increasingly complicated and contradictory.⁴⁹⁵

Enforcement authorities who view regulated persons as normative actors use a cooperative approach to induce compliance.⁴⁹⁶ The goal of cooperation in enforcement is to encourage compliance.⁴⁹⁷ This goal is achieved by authorities using their discretion to provide regulated persons with assistance and incentives to encourage compliance.⁴⁹⁸ Assistance includes the dissemination of information, technological assistance and inspections aimed at providing regulated persons with compliance advice.⁴⁹⁹ The cooperative approach is based on flexible and lenient enforcement that deals with non-compliance on a case by case basis.⁵⁰⁰ Therefore, regulated persons are given opportunities to rectify transgressions before sanctions are imposed through coercive means.⁵⁰¹

Cooperative enforcement is deemed to be successful if enforcement authorities have considerable discretion to provide guidance and incentives to help regulated persons achieve

⁴⁹¹ Rechtschaffen (1998) *Southern California Law Review* 1187; Glicksman (2015) *International Review of Law and Economics* 136.

⁴⁹² Glicksman (2015) *International Review of Law and Economics* 136.

⁴⁹³ Abbot *Enforcing Pollution Control Regulation* 42; Rechtschaffen (1998) *Southern California Law Review* 1188; Malloy (2003) *Temple Law Review* 454.

⁴⁹⁴ Rechtschaffen (1998) *Southern California Law Review* 1188.

⁴⁹⁵ Malloy (2003) *Temple Law Review* 454; Craigie, Snijman & Fourie ‘Dissecting Environmental Compliance and Enforcement’ in *Environmental Compliance and Enforcement in South Africa* 44.

⁴⁹⁶ Abbot *Enforcing Pollution Control Regulation* 42.

⁴⁹⁷ Glicksman (2015) *International Review of Law and Economics* 136.

⁴⁹⁸ J Hanks ‘Achieving Industrial Sustainable Development in South Africa: What Role for Self-regulatory and Co-regulatory Instruments’ (1998) 5 *SAJELP* 309 – 310.

⁴⁹⁹ Cohen (2000) *The Environmental Law Reporter* 10245; Rechtschaffen & Markell *Reinventing Environmental Enforcement* 68, 70.

⁵⁰⁰ Glicksman (2015) *International Review of Law and Economics* 136.

⁵⁰¹ Glicksman (2015) *International Review of Law and Economics* 136.

compliance.⁵⁰² Authorities under this approach avoid using sanctions as it is a mark of failure for them. Enforcement under the normative approach is predominantly prospective since its aim is to encourage compliance.⁵⁰³

3.3 Analysing Theories of Enforcement

The coercive approach is the prevailing societal approach to environmental enforcement in a number of jurisdictions.⁵⁰⁴ The same is true for the South African One Environmental System.⁵⁰⁵ Although coercion is the dominant approach, cooperation is also relied on.⁵⁰⁶ In essence, the enforcement authority in this system uses a hybrid approach.⁵⁰⁷ The legal positivist, Hart advocated for this approach when he stated that it is only reasonable to expect regulated persons to voluntarily cooperate in a coercive system.⁵⁰⁸

The purpose of enforcement action, especially enforcement by the government, is to bring violators back into compliance rather than subjecting them to sanctions.⁵⁰⁹ To illustrate this purpose, a publication by the Centre for Environmental Rights shows that a number of companies that have violated provisions of the One Environmental System were met with either no sanctions or minor ones.⁵¹⁰ The enforcement, or lack thereof, of section 24G of NEMA is a good example. The section provides that the Department of Mineral Resources and Energy (the DMRE) must impose an administrative fine when a mining company conducts activities without an environmental authorisation.⁵¹¹ In the 2017/2018 reporting year, the DMRE identified multiple companies operating without environmental authorisations.⁵¹² However, no

⁵⁰² B Van Rooij *Regulating Land and Pollution in China: Lawmaking, Compliance and Enforcement; Theory and Cases* (2006) 299.

⁵⁰³ Rechtschaffen (1998) *Southern California Law Review* 1188.

⁵⁰⁴ Abbot *Enforcing Pollution Control Regulation* 43; Rechtschaffen (1998) *Southern California Law Review* 1188; Glicksman (2015) *International Review of Law and Economics* 136.

⁵⁰⁵ M Kidd *Environmental Law* 2 ed (2011) 269; A Paterson & LJ Kotze 'Towards a more Effective Environmental Compliance and Enforcement Regime for South Africa' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa Legal Perspectives* (2009) 375.

⁵⁰⁶ Paterson & Kotze 'Towards a more Effective Environmental Compliance and Enforcement Regime for South Africa' in *Environmental Compliance and Enforcement in South Africa* 375.

⁵⁰⁷ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 52; see sections 31K – 31N of NEMA illustrating how the hybrid structure operates. These sections show that when there is a violation, the enforcement authority begins by issuing a notice before resorting to harsher measures like revoking a licence.

⁵⁰⁸ HLA Hart *The Concept of Law* 2 ed (1994) 198.

⁵⁰⁹ Abbot *Enforcing Pollution Control Regulation* 43; Rechtschaffen (1998) *Southern California Law Review* 1188.

⁵¹⁰ Centre for Environmental Rights 'Mining Companies Launch their First Attacks on the One Environmental System' available at <http://cer.org.za/news/mining-companies-launch-their-first-attacks-on-the-one-environmental-system>; accessed on 03 April 2017; see Chapter 2, part 5 of this dissertation.

⁵¹¹ Section 24G NEMA.

⁵¹² Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* (2019) unpublished parliamentary document presented to

finer were issued.⁵¹³ The leniency by enforcement authorities is corroborated by the judgments in *S v Blue Platinum Ventures (Pty) Ltd*⁵¹⁴ and *S v Nkomati Anthracite (Pty) Ltd*.⁵¹⁵ Inspectors are sometimes flexible towards non-complying companies and use considerable discretion when enforcing the regulations.⁵¹⁶ It can be deduced that when inspectors carry out their enforcement mandate, they aim to encourage compliance, rather than to punish violators.⁵¹⁷

As mentioned above, the One Environmental System relies on the hybrid approach with the coercive approach being more dominant than the cooperative approach.⁵¹⁸ In response to the scholarship on the dominance of the coercive approach, there is a call to reform this enforcement approach.⁵¹⁹ However, a case for the continued use of coercion has also been made.⁵²⁰ Although the following discussion considers the merits and demerits of the coercive and cooperative approach, ultimately effective environmental enforcement requires both approaches.⁵²¹ Therefore, the discussion recommends a way in which both approaches can be implemented to achieve effective environmental enforcement.⁵²²

3.3.1 Calls to Reform the Hybrid System by Dismantling the Coercive Approach

There are calls to reform the hybrid system of enforcement by dismantling the coercive approach and relying only on the cooperative approach to enforcement.⁵²³ The call comes from those who are against effective environmental enforcement.⁵²⁴ These include mining companies that want environmental regulations relaxed for them.⁵²⁵ It also includes political

the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 19 November 2018 (copy on file with author) 7.

⁵¹³ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 7.

⁵¹⁴ *S v Blue Platinum Ventures (Pty) Ltd* 2015 JDR 1740 (GP); see Chapter 2, part 5 of this dissertation.

⁵¹⁵ *S v Nkomati Anthracite (Pty) Ltd* unreported (Nelspruit Regional Court) case no 412/13 of 13 August 2013; See Chapter 2, part 5 of this dissertation.

⁵¹⁶ Rechtschaffen (1998) *Southern California Law Review* 1188.

⁵¹⁷ Abbot *Enforcing Pollution Control Regulation* 43; Rechtschaffen (1998) *Southern California Law Review* 1189.

⁵¹⁸ Paterson & Kotze 'Towards a more Effective Environmental Compliance and Enforcement Regime for South Africa' in *Environmental Compliance and Enforcement in South Africa* 375.

⁵¹⁹ Cohen (2000) *The Environmental Law Reporter* 10245.

⁵²⁰ Rechtschaffen (1998) *Southern California Law Review* 1190.

⁵²¹ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 61; Van Rooij *Regulating Land and Pollution in China* 231; Abbot *Enforcing Pollution Control Regulation* 44.

⁵²² Ayres & Braithwaite *Responsive Regulation* 35 – 36.

⁵²³ F Pearce & S Tombs 'Ideology, Hegemony and Empiricism: Compliance Theories of Regulation' (1990) 30 *The British Journal of Criminology* 424; Hawkin (1991) *The British Journal of Criminology* 428; Bardach & Kagan *Going by the Book* 58; Cohen (2000) *The Environmental Law Reporter* 10245;

⁵²⁴ Rechtschaffen (1998) *Southern California Law Review* 1190.

⁵²⁵ Pearce & Tombs (1990) *The British Journal of Criminology* 440; Centre for Environmental Rights 'Mining Companies Launch their First Attacks on the One Environmental System' available at

leaders that are involved in the regulation process and relax enforcement to create an investor-friendly climate.⁵²⁶ The focus of this discussion however is the argument made by scholars that support the goal of effective environmental enforcement.⁵²⁷

The coercive approach to enforcement has been criticised for being counterproductive in that it makes regulated persons resentful and less likely to comply with regulations.⁵²⁸ This argument stems from a juxtaposition of coercion with cooperation.⁵²⁹ The assumption is that regulated persons are law-abiding citizens, therefore persuasion is more effective than punishment.⁵³⁰ If enforcement authorities thus respond to non-compliance with sanctions, regulated persons will become hostile and resentful.⁵³¹ As a result, regulated persons will resist cooperating with authorities by withholding information, exploiting regulatory loopholes and frequent appealing and reviewing decisions made by authorities.⁵³²

Due to reduced cooperation, enforcement authorities will experience difficulties in executing their mandate.⁵³³ Detecting violations will become harder because regulated persons are less likely to voluntarily disclose the challenges that they face in achieving compliance.⁵³⁴ Enforcement authorities will use more resources to litigate against the violators.⁵³⁵ They will also spend more time and effort gathering evidence for the litigation.⁵³⁶ Essentially, the coercive approach is counterproductive in that it results in reduced compliance by regulated

<http://cer.org.za/news/mining-companies-launch-their-first-attacks-on-the-one-environmental-system>; accessed on 03 April 2017.

⁵²⁶ G Ashton 'An Example of the Impacts of Adopting the 'One Environmental System' of Mining Governance: Some Lessons in Environmental Governance from MRC's Tormin Mine' 2017 *Conversation around Transparency and Accountability in South Africa's Extractive Sector* 17; See Chapter 2, part 5 of this dissertation.

⁵²⁷ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 2; Rechtschaffen (1998) *Southern California Law Review* 1190; Pearce & Tombs (1990) *The British Journal of Criminology* 440.

⁵²⁸ F Pearce & S Tombs 'Policing Corporate Skid Rows A Reply to Keith Hawkins' (1991) 31 *The British Journal of Criminology* 416; Kagan & Scholz 'The "Criminology of the Corporation" and Regulatory Enforcement Strategies' in *Enforcing Regulations* 72; Bardach & Kagan *Going by the Book* 114; Glicksman (2015) *International Review of Law and Economics* 136.

⁵²⁹ Abbot *Enforcing Pollution Control Regulation* 44.

⁵³⁰ Abbot *Enforcing Pollution Control Regulation* 39; Glicksman (2015) *International Review of Law and Economics* 136; Rechtschaffen (1998) *Southern California Law Review* 1203.

⁵³¹ Glicksman (2015) *International Review of Law and Economics* 136.

⁵³² Rechtschaffen (1998) *Southern California Law Review*.

⁵³³ Van Rooij *Regulating Land and Pollution in China* 229.

⁵³⁴ Rechtschaffen (1998) *Southern California Law Review* 1204.

⁵³⁵ Pearce & Tombs (1990) *The British Journal of Criminology* 428; Rechtschaffen (1998) *Southern California Law Review* 1204.

⁵³⁶ Van Rooij *Regulating Land and Pollution in China*.

persons and increased costs to enforcement authorities.⁵³⁷ Therefore, enforcement authorities should rely more on the cooperative rather than the coercive approach to enforcement.⁵³⁸

Proponents of the coercive approach are not convinced by the argument that cooperation is more effective than coercion.⁵³⁹ This is because the argument against coercion is founded on a few assumptions about enforcement behaviour that can be dispelled.⁵⁴⁰

The first assumption made by advocates of the cooperative approach is that regulated persons, such as mining companies, abide by the law.⁵⁴¹ This assumption is problematic, especially in the context of environmental law.⁵⁴² According to this argument, mining companies are likely to violate environmental protection laws more often than laws that promote economic integrity such as tax, securities and trade laws.⁵⁴³ Reason being that rational actors seek to promote economic self-interest.⁵⁴⁴ In the absence of coercion, companies are likely to comply with laws that benefit them, hence laws promoting economic integrity enjoy greater compliance.⁵⁴⁵

The second assumption is that enforcement authorities under the coercive approach are rigid and respond to all violations with penalties.⁵⁴⁶ The response to this assumption is that enforcers are more inclined to negotiate informally with violators before resorting to the penalties prescribed in the relevant regulations.⁵⁴⁷ This exercise of discretion by enforcers is seen as necessary, desirable and practical.⁵⁴⁸

The third assumption is that regulated persons have the resources to comply with laws.⁵⁴⁹ Companies can be persuaded to comply with laws if they have the resources to comply.⁵⁵⁰ However, it is unlikely that they will comply if they do not have the resources that will bring

⁵³⁷ Rechtschaffen (1998) *Southern California Law Review* 1204.

⁵³⁸ Pearce & Tombs (1990) *The British Journal of Criminology* 423.

⁵³⁹ Pearce & Tombs (1990) *The British Journal of Criminology* 424.

⁵⁴⁰ Rechtschaffen (1998) *Southern California Law Review* 1205.

⁵⁴¹ Pearce & Tombs (1990) *The British Journal of Criminology* 424; Rechtschaffen (1998) *Southern California Law Review* 1206.

⁵⁴² Rechtschaffen (1998) *Southern California Law Review* 1206.

⁵⁴³ PC Yeager *The Limits of the Law: The Public Regulation of Private Pollution* (1991) 8 – 10.

⁵⁴⁴ Yeager *The Limits of the Law* 8 – 10.

⁵⁴⁵ Yeager *The Limits of the Law* 8 – 10.

⁵⁴⁶ Pearce & Tombs (1990) *The British Journal of Criminology* 427; Rechtschaffen (1998) *Southern California Law Review* 1205.

⁵⁴⁷ Rechtschaffen (1998) *Southern California Law Review* 1206; Yeager *The Limits of the Law* 280 (The studies done that reached this conclusion were done in the United States of America).

⁵⁴⁸ R Kinsey, J Lea & J Young *Losing the Fight Against Crime* (1986) 161 – 162; Pearce & Tombs (1990) *The British Journal of Criminology* 427.

⁵⁴⁹ Pearce & Tombs (1991) *The British Journal of Criminology* 423.

⁵⁵⁰ Rechtschaffen (1998) *Southern California Law Review* 1206.

about compliance and if compliance will lead to significant financial implications for the company.⁵⁵¹

From a theoretical perspective, a case has been made for the reform of the traditional approach to enforcement, which is a hybrid system with coercive enforcement as the dominant approach.⁵⁵² Notwithstanding this view, there is little consensus on which approach to enforcement is more effective than the other.⁵⁵³ In South Africa, there is little definitive evidence of the overall state of compliance with and enforcement of the One Environmental System.⁵⁵⁴ Parliament has expressed its disappointment with the lack of reporting on the enforcement of the One Environmental System by the DMRE.⁵⁵⁵

After considering the call to reform the hybrid approach, the following discussion considers which approach authorities should adopt to achieve high levels of compliance. Based on the legislative provisions of the One Environmental System and limited knowledge of its enforcement, this section finds that the system is a hybrid one with elements of both coercion and cooperation.⁵⁵⁶ Because there is little consensus on which theoretical approach is more effective, the following section unpacks the benefits of using the coercive approach in a hybrid system.⁵⁵⁷

3.3.2 Arguments for a Hybrid System of Enforcement which Emphasises the Coercive Approach to Enforcement

It may be tempting to reform traditional environmental enforcement by dismantling the coercive approach.⁵⁵⁸ Pursuing the reform may be “short-sighted and detrimental to South Africa’s long-term interest in effective environmental enforcement.”⁵⁵⁹ There are a number of benefits of the coercive approach that are important for an effective system of enforcement.⁵⁶⁰

⁵⁵¹ Rechtschaffen (1998) *Southern California Law Review* 1206.

⁵⁵² Cohen (2000) *The Environmental Law Reporter* 10245; Pearce & Tombs (1990) *The British Journal of Criminology* 423.

⁵⁵³ Glicksman (2015) *International Review of Law and Economics* 136.

⁵⁵⁴ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 1 & 6.

⁵⁵⁵ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

⁵⁵⁶ Sections 31K – 31N of NEMA illustrate how the hybrid structure operates. These sections show that when there is a violation, the enforcement authority begins by issuing a notice before resorting to harsher measures like revoking a licence.

⁵⁵⁷ Glicksman (2015) *International Review of Law and Economics* 136.

⁵⁵⁸ Rechtschaffen (1998) *Southern California Law Review* 1225.

⁵⁵⁹ Rechtschaffen (1998) *Southern California Law Review* 1225.

⁵⁶⁰ Pearce & Tombs (1990) *The British Journal of Criminology* 433.

Firstly, it provides a credible threat of enforcement.⁵⁶¹ Secondly, it discourages state capture.⁵⁶² Lastly, it discourages the inconsistent treatment of regulated persons by enforcement authorities.⁵⁶³ These benefits are discussed in greater detail below.

The first positive attribute of the coercive approach is that it sends a credible signal that compliance will be monitored.⁵⁶⁴ Enforcement authorities often “lack the resources to comprehensively inspect and monitor every regulated person.”⁵⁶⁵ Therefore, their enforcement actions need to be effective in that they send a “strong and credible threat of enforcement” to regulated persons that non-compliance will be meted with penalties.⁵⁶⁶ These penalties should include the recovery all economic gain realised from non-compliance.⁵⁶⁷ Seizing all economic benefits instead of imposing a fine is more pragmatic as the fine imposed may be less than the economic benefit of non-compliance.⁵⁶⁸ In such a case, “imposing a fine would be ineffective because the regulated person would have no incentive to comply since not complying would be more economically viable.”⁵⁶⁹ Section 34(3) of NEMA is one such provision that threatens enforcement by providing for the seizure of all economic gain that results from unlawful environmental degradation.⁵⁷⁰

The threat of enforcement is as important as actual enforcement for purposes of achieving compliance.⁵⁷¹ In essence, it is not necessary for authorities to always punish non-compliance. Instead, it is important for regulated persons to believe that their non-compliance will be punished.⁵⁷² Publicising coercive enforcement can result in enhanced compliance by increasing a regulated person’s subjective belief that they will be caught.⁵⁷³ Therefore, sole reliance on

⁵⁶¹ Bardach & Kagan *Going by the Book* 123.

⁵⁶² MO Dassah ‘Theoretical Analysis of state capture and its manifestation as a governance problem in South Africa’ (2018) 14 *The Journal of Transdisciplinary Research in Southern Africa* 1 defines state capture as collusion between that state and regulated persons to the benefit of said private individual; PA Croucamp & L Malan ‘The Theory of Systematic Patronage and State Capture’ (2018) 10 *African Journal of Public Affairs* 87; In the United States of America, the term regulatory/agency capture is used in a similar context – for a discussion of the topic, see BC Mank ‘Superfund Contractors and Agency Capture’ (1993) 2 *NYU Environmental Law Journal* 34 & 49; JQ Wilson *What Government Agencies Do and Why They Do it* (1990) 74; M Shapiro *Who Guards the Guardians: Judicial Control of Administration* (1998) 65 – 66.

⁵⁶³ Rechtschaffen (1998) *Southern California Law Review* 1225.

⁵⁶⁴ Bardach & Kagan *Going by the Book* 123.

⁵⁶⁵ Stigler ‘The Optimum Enforcement of Laws’ in *Essays in the Economics of Crime and Punishment* 56

⁵⁶⁶ Hawkin (1991) *The British Journal of Criminology* 428.

⁵⁶⁷ Rechtschaffen (1998) *Southern California Law Review* 1225.

⁵⁶⁸ Rechtschaffen (1998) *Southern California Law Review* 1225.

⁵⁶⁹ Rechtschaffen (1998) *Southern California Law Review* 1225.

⁵⁷⁰ Section 34(3) NEMA.

⁵⁷¹ DC Michael ‘Cooperative Implementation of Federal Regulations’ (1996) 13 *Yale Journal on Regulation* 548.

⁵⁷² WA Magat & WK Viscusi ‘Effectiveness of the EPA’s Regulatory Enforcement: The Case of Industrial Effluent Standards’ (1990) 33 *The Journal of Law and Economics* 331 & 343.

⁵⁷³ Tyler *Why People Obey the Law* (1990) 22 – 23.

the cooperative approach to enforcement falls short in that it merely promotes compliance.⁵⁷⁴ “Being persuaded to comply without the threat of punishment greatly reduces the incentive to comply.⁵⁷⁵ Therefore, shifting too far toward cooperative enforcement threatens to undermine the threat of enforcement that is necessary for widespread compliance.”⁵⁷⁶

The second positive attribute of the coercive approach is that it discourages state capture.⁵⁷⁷ One distinguishing feature of the cooperative approach is that authorities work closely with regulated persons to bring them into compliance.⁵⁷⁸ Authorities play the role of advisors instead of inspectors and punishers.⁵⁷⁹ The benefits of the cooperative approach cannot be denied.⁵⁸⁰ However, there is a concern that this approach can yield counterproductive results.⁵⁸¹ Authorities who establish a close relationship with regulated persons may overlook grave violations and exercise leniency in carrying out their enforcement mandate.⁵⁸² In essence, enforcement authorities will be influenced by regulated persons.⁵⁸³ Such a situation is known as state capture.⁵⁸⁴

State capture is not a novel concept.⁵⁸⁵ Recommendations of how to deal with state capture have included restricting the discretion and flexibility of enforcement authorities.⁵⁸⁶ Restricting the flexibility of authorities may be detrimental in that authorities may punish trivial violations thereby sparking resentment from regulated persons.⁵⁸⁷ There are a number of ways to deal with this concern. Firstly, the empowered governmental departments can assign the task of carrying out “cooperative” enforcement to a select group of inspectors instead of tasking all inspectors with the traditional inspection and enforcement duties.⁵⁸⁸ Secondly, authorities can

⁵⁷⁴ Rechtschaffen (1998) *Southern California Law Review* 1226.

⁵⁷⁵ CS Russel, W Harrington & WJ Vaughan *Enforcing Pollution Control Laws* (1986) 38 – 39; Rechtschaffen (1998) *Southern California Law Review* 1230.

⁵⁷⁶ Rechtschaffen (1998) *Southern California Law Review* 1230.

⁵⁷⁷ Rechtschaffen (1998) *Southern California Law Review* 1222.

⁵⁷⁸ Rechtschaffen (1998) *Southern California Law Review* 1222.

⁵⁷⁹ Rechtschaffen (1998) *Southern California Law Review* 1222.

⁵⁸⁰ Glicksman (2015) *International Review of Law and Economics* 136.

⁵⁸¹ Rechtschaffen (1998) *Southern California Law Review* 1222.

⁵⁸² Rechtschaffen (1998) *Southern California Law Review* 1222.

⁵⁸³ Rechtschaffen (1998) *Southern California Law Review* 1222.

⁵⁸⁴ Rechtschaffen (1998) *Southern California Law Review* 1222.

⁵⁸⁵ JS Hellman, G Jones & D Kaufmann ‘Seize the State, Seize the Day: State Capture, Corruption and Influence in Transition’ (2000) *The World Bank Policy Research Working Paper 2444* available at <http://siteresources.worldbank.org/INTABCDEWASHINGTON2000/Resources/hellman.pdf> accessed on 30 March 2019; Shapiro *Who Guards the Guardians* 65 – 66.

⁵⁸⁶ Bardach & Kagan *Going by the Book* 44 – 46.

⁵⁸⁷ Bardach & Kagan *Going by the Book* 44 – 46; see CR Snyman *Criminal Law* 6 ed (2014) 139 -140 for a discussion of the maxim *de minimis non curat lex*, which means that the law does not punish crimes of a trivial nature.

⁵⁸⁸ Bardach & Kagan *Going by the Book* 44 – 46.

involve public interest groups in the enforcement process. For violations that prompt authorities to be flexible in their enforcement, authorities can employ public interest groups to assess the violation and suggest cooperative ways to bring the recalcitrant person to compliance.⁵⁸⁹

The third positive attribute of the coercive approach is that it discourages the inconsistent treatment of regulated persons by enforcement authorities.⁵⁹⁰ Most authorities aspire to have an enforcement system that is consistent, that is one that treats similarly placed persons similarly. Consistency is important for ensuring the credibility of an enforcement system and pervasive compliance.⁵⁹¹

In the context of environmental law, “consistent treatment is essential so that regulated persons believe that they are competing on a level playing field.”⁵⁹² A study shows that mining companies that take measures to ensure that they comply with environmental protection laws want their competitors who do not take similar measures to be forced into compliance.⁵⁹³ The reasoning is that recalcitrant companies that are allowed to evade compliance will have an unfair advantage over their compliant competitors.⁵⁹⁴ The result of the competitive disadvantage is that the compliant companies may stop making an effort to comply with environmental protection laws.⁵⁹⁵

A strictly cooperative approach to enforcement will unlikely solve the problem of varied treatment of regulated persons and its consequences.⁵⁹⁶ If anything, it will probably exacerbate it.⁵⁹⁷ In a cooperative system that leaves compliance and enforcement issues open to negotiation, authorities will respond differently to similarly placed offenders.⁵⁹⁸ The disparate treatment of such violators undermines compliance and enforcement because it gives the impression that violations will sometimes go unpunished.⁵⁹⁹ It is thus important to use a hybrid

⁵⁸⁹ Ayres & Braithwaite *Responsive Regulation* 54 – 60. 1

⁵⁹⁰ Rechtschaffen (1998) *Southern California Law Review* 1223.

⁵⁹¹ JF Dimento *Environmental Law and American Business: Dilemmas of Compliance* (1986) 100 – 102.

⁵⁹² Rechtschaffen (1998) *Southern California Law Review* 1223.

⁵⁹³ The National Academy of Public Administration *Setting Priorities, Getting Results: A New Direction for the Environmental Protection Agency* (1995) 25 (this study of businesses’ compliance behaviour was conducted in the United States of America).

⁵⁹⁴ GV Cleve & KW Holman ‘Promise and Reality in the Enforcement of the Amended Clean Air Act Part II: Federal Enforceability and Environmental Auditing’ (1997) 27 *Environmental Law Reporter* 10 & 157.

⁵⁹⁵ CC White ‘Regulation of Leaky Underground Fuel Tanks: An Anatomy of Regulatory Failure’ (1996) 14 *UCLA Journal of Environmental Law and Policy* 136 – 137.

⁵⁹⁶ Pearce & Tombs (1990) *The British Journal of Criminology* 433; Hawkin (1991) *The British Journal of Criminology* 428; P Downing ‘Bargaining in Pollution Control’ (1983) 11 *Policy Studies Journal* 581 – 582.

⁵⁹⁷ Rechtschaffen (1998) *Southern California Law Review* 1224.

⁵⁹⁸ Rechtschaffen (1998) *Southern California Law Review* 1224.

⁵⁹⁹ Downing (1983) *Policy Studies Journal* 584.

approach to enforcement.⁶⁰⁰ In this way, authorities have the option of using coercion which treats similarly placed violators consistently.⁶⁰¹

3.3.3 Implementing a Hybrid Approach to Enforcement

Due to the lack of empirical research evidencing which approach to environmental enforcement is most effective, it is no surprise that most enforcement systems rely on a hybrid system that mixes both coercion and cooperation.⁶⁰² Braithwaite goes as far as saying that it is “foolish” to adhere strictly to one approach.⁶⁰³ Because the One Environmental System may be classified as a hybrid system of enforcement,⁶⁰⁴ it is best to consider how this system should be implemented to ensure effective enforcement.⁶⁰⁵

Given that this chapter accepts that the One Environmental System adopts a hybrid approach to enforcement, the question that remains is: when do authorities cooperate and when do they coerce regulated persons into compliance?⁶⁰⁶ Upon detecting a violation, authorities should begin with the less intrusive cooperative approach which involves warnings and encouraging regulated persons to comply with the law.⁶⁰⁷ It is only when these fail that authorities should resort to the coercive approach which involves fines, revocation of licences and criminal prosecution.⁶⁰⁸ Shavell suggests that “the greater the harm, the higher the sanction should be.”⁶⁰⁹ Maximum sanctions should be reserved for high offences because the stricter the sanction, the more costly it would be for the government to impose.⁶¹⁰ Implementing effective enforcement can be explained using the following enforcement pyramid.⁶¹¹

⁶⁰⁰ Hawkin (1991) *The British Journal of Criminology* 428.

⁶⁰¹ Pearce & Tombs (1990) *The British Journal of Criminology* 433.

⁶⁰² Van Rooij *Regulating Land and Pollution in China* 231; Hawkin (1991) *The British Journal of Criminology* 428.

⁶⁰³ Braithwaite (2002) *Journal of Law and Society* 19.

⁶⁰⁴ Van Rooij *Regulating Land and Pollution in China* 231; see sections 31K – 31N of NEMA illustrating how the hybrid structure operates. These sections show that when there is a violation, the enforcement authority begins by issuing a notice before resorting to harsher measures like revoking a licence.

⁶⁰⁵ Abbot *Enforcing Pollution Control Regulation* 39; Braithwaite (2002) *Journal of Law and Society* 20; Ayres & Braithwaite *Responsive Regulation* 35.

⁶⁰⁶ J Braithwaite *To Punish or to Persuade: Enforcement of Coal Mine Safety* 86; Abbot *Enforcing Pollution Control Regulation* 39.

⁶⁰⁷ Braithwaite (2002) *Journal of Law and Society* 20; see section 31K NEMA for an example.

⁶⁰⁸ Braithwaite (2002) *Journal of Law and Society* 20; see section 31N NEMA for an example.

⁶⁰⁹ Braithwaite (2002) *Journal of Law and Society* 20.

⁶¹⁰ Braithwaite (2002) *Journal of Law and Society* 20.

⁶¹¹ Ayres & Braithwaite *Responsive Regulation* 35.

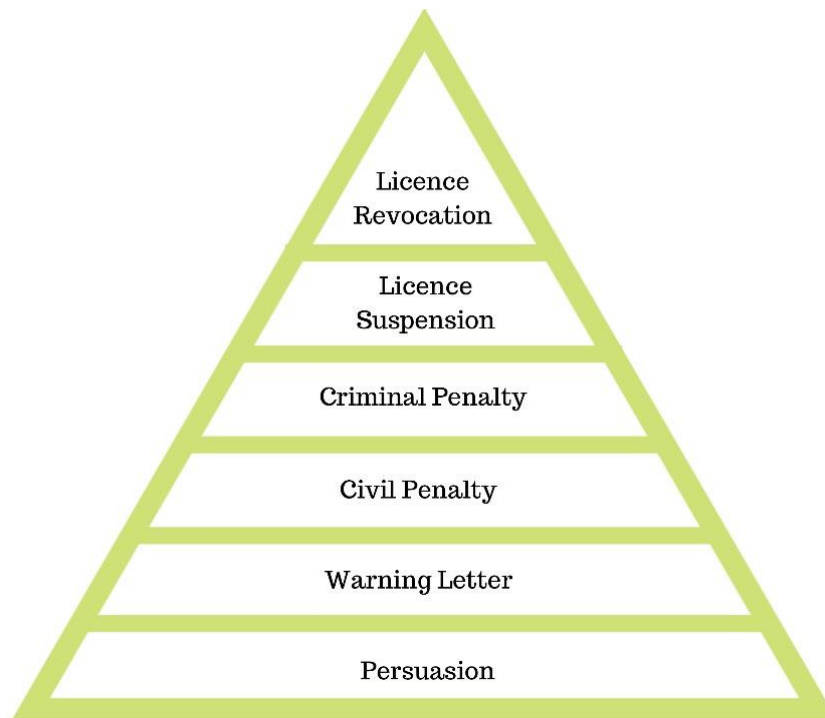


Figure 5: Enforcement pyramid⁶¹²

The enforcement pyramid proposes to solve the question of when to use cooperation and when to use coercion to induce compliance.⁶¹³ The pyramid begins with a cooperative approach to enforcement, namely persuasion.⁶¹⁴ As enforcement action escalates up the pyramid, more coercive and punitive measures are introduced.⁶¹⁵ The premise of the pyramid is that enforcement should always begin with the cooperative approach then escalate to more coercive measures reluctantly and when the less intrusive measures fail.⁶¹⁶

The amount of space at each tier of the pyramid represents the suggested amount of enforcement activity at that level.⁶¹⁷ Most enforcement action should take place at the “base of the pyramid where attempts are first made to induce compliance with persuasion.”⁶¹⁸ Persuasion is often described as the most restorative way of enforcing compliance with the law.⁶¹⁹ If persuasion does not secure compliance, authorities should issue warning letters. The next phase of enforcement is the imposition of civil penalties.⁶²⁰ If civil penalties do not work,

⁶¹² Ayres & Braithwaite *Responsive Regulation* 35.

⁶¹³ Braithwaite (2002) *Journal of Law and Society* 20.

⁶¹⁴ Braithwaite (2002) *Journal of Law and Society* 20.

⁶¹⁵ Braithwaite (2002) *Journal of Law and Society* 20.

⁶¹⁶ Braithwaite (2002) *Journal of Law and Society* 20.

⁶¹⁷ Ayres & Braithwaite *Responsive Regulation* 35.

⁶¹⁸ Ayres & Braithwaite *Responsive Regulation* 35.

⁶¹⁹ Braithwaite (2002) *Journal of Law and Society* 20.

⁶²⁰ Ayres & Braithwaite *Responsive Regulation* 36.

enforcers should consider imposing criminal penalties then suspending the licence or permit to operate.⁶²¹ As a last resort, enforcers can revoke a company's licence or permit to operate a mining company.⁶²²

4 Conclusion

In this chapter, the analysis of the rationalist and normative theories finds that behavioural motivations that drive compliance decisions do not fall squarely within one theory.⁶²³ Instead, the two theories are different lenses for understanding the basis on which regulated persons make compliance decisions.⁶²⁴ Both theories prevail to different degrees under different circumstances.⁶²⁵

In the context of enforcement, there is a lack of empirical research evidencing which approach to enforcement is more effective than the other.⁶²⁶ In fact, there is little definitive evidence of the overall state of compliance with and enforcement of the One Environmental System.⁶²⁷ The limited empirical evidence in this area provides an opportunity for further research. Nevertheless, using the available resources and assessing literature on environmental enforcement in other jurisdictions, this chapter concludes that the One Environmental System adopts a hybrid approach.⁶²⁸ Its enforcement authorities rely on the coercive and cooperative approaches as they both have attributes that contribute to effective environmental enforcement.⁶²⁹

Since the discussion favours a hybrid approach, this chapter proposes a way in which this approach should be implemented.⁶³⁰ Enforcement authorities should implement enforcement by starting with the cooperative approach then escalating to more coercive measures reluctantly

⁶²¹ Ayres & Braithwaite *Responsive Regulation* 36.

⁶²² Ayres & Braithwaite *Responsive Regulation* 36; Braithwaite (2002) *Journal of Law and Society* 20.

⁶²³ Kagan & Scholz 'The "Criminology of the Corporation" and Regulatory Enforcement Strategies' in *Enforcing Regulations* 68; Hawkins (1990) *The British Journal of Criminology* 453; Zaelke, Kaniaru & Kruzikova *Making Law Work* 55; Hawkin (1991) *The British Journal of Criminology* 428.

⁶²⁴ Zaelke, Kaniaru & Kruzikova *Making Law Work* 62.

⁶²⁵ Malloy (2003) *Temple Law Review* 456 & 475.

⁶²⁶ Rechtschaffen (1998) *Southern California Law Review* 1205; Hawkins (1990) *The British Journal of Criminology* 454 argues that more research needs to be done into how regulated persons like businesses make compliance decisions.

⁶²⁷ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 1 & 6.

⁶²⁸ Van Rooij *Regulating Land and Pollution in China* 231; see sections 31K – 31N of NEMA of how the hybrid structure operates. These sections show that when there is a violation, the enforcement authority begins by issuing a notice before resorting to harsher measures like revoking a licence.

⁶²⁹ Rechtschaffen (1998) *Southern California Law Review* 1204 & 1225; Van Rooij *Regulating Land and Pollution in China* 229.

⁶³⁰ Braithwaite (2002) *Journal of Law and Society* 20; Ayres & Braithwaite *Responsive Regulation* 35.

and when the less intrusive measures fail.⁶³¹ Which cooperative and coercive measures are used to enforce the One Environmental System is discussed in the following chapter.

⁶³¹ Braithwaite (2002) *Journal of Law and Society* 20.

Chapter 4:

Compliance and Enforcement Measures in the One Environmental System

1 Introduction

Chapter three establishes that there are varying ways in which enforcement authorities in the One Environmental System can secure compliance with its regulations.⁶³² Theoretically, authorities use a combination of coercive and cooperative measures.⁶³³ In practice, the theory holds true.⁶³⁴ The enforcement measures used are commonly categorised as command-and-control measures as well as alternative compliance measures.⁶³⁵ On the one hand, command-and-control measures include criminal, administrative and civil measures.⁶³⁶ On the other hand, alternative compliance measures include incentive-based measures and voluntary compliance measures.⁶³⁷

This chapter aims to set out the enforcement measures that are available to secure compliance with the One Environmental System.⁶³⁸ These measures are used to different degrees under different circumstances.⁶³⁹ Although command-and-control measures are the most commonly used, this chapter suggests that they should be used as a last resort, after using alternative measures.⁶⁴⁰

⁶³² Chapter 3 of this dissertation.

⁶³³ Chapter 3 of this dissertation.

⁶³⁴ M Kidd *Environmental Law* 2 ed (2011) 268; F Craigie, P Snijman & M Fourie 'Dissecting Environmental Compliance and Enforcement' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 51.

⁶³⁵ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 51.

⁶³⁶ M Kidd 'Alternatives to the Criminal Sanction in the Enforcement of Environmental Law' (2002) 9 *SAJELP* 26.

⁶³⁷ Kidd (2002) *SAJELP* 26.

⁶³⁸ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 51.

⁶³⁹ Kidd *Environmental Law* 269.

⁶⁴⁰ Kidd *Environmental Law* 269.

2 Command-and-control Measures

As the name suggests, command-and-control measures have two main processes.⁶⁴¹ First, there is the command, which involves prescribing laws that require compliance.⁶⁴² Secondly, the control involves compelling compliance by using enforcement measures in cases of non-compliance.⁶⁴³ These two processes are the basic characteristics of command-and-control measures.⁶⁴⁴ An enforcement system that relies on this measure generally makes provision for prior approval mechanisms such as licences, authorisations and permits.⁶⁴⁵ Where prior approval is required, it is unlawful to conduct certain activities without the requisite authorisation.⁶⁴⁶

The most notable command-and-control measures in environmental enforcement are criminal, administrative and civil measures.⁶⁴⁷ The main difference between these measures lies in their underlying objective.⁶⁴⁸ While criminal measures focus on penalising persons for causing environmental degradation, administrative and civil measures are aimed at directing persons to refrain from activities that cause environmental degradation.⁶⁴⁹

Due to the narrow scope of this research, the following discussion is limited to criminal and administrative measures. A discussion into civil measures is not explored because such measures are seldom used and considered inadequate for purposes of environmental enforcement.⁶⁵⁰

Although traditionally, environmental enforcement authorities have relied on criminal measures, there is a shift towards a hybrid approach that incorporates administrative measures

⁶⁴¹ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 51.

⁶⁴² Kidd (2002) *SAJELP* 26.

⁶⁴³ Kidd (2002) *SAJELP* 26.

⁶⁴⁴ C Abbot *Enforcing Pollution Control Regulation Strengthening Sanctions and Improving Deterrence* (2009) 4.

⁶⁴⁵ Abbot *Enforcing Pollution Control Regulation* 4.

⁶⁴⁶ Abbot *Enforcing Pollution Control Regulation* 4.

⁶⁴⁷ P Cane 'Using Tort Law to Enforce Environmental Regulation?' (2002) 41 *Washburn Law Journal* 451.

⁶⁴⁸ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 52.

⁶⁴⁹ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 52.

⁶⁵⁰ F Soltau 'The National Environmental Management Act and Liability for Environmental Damage' (1999) 6 *SAJELP* 35; see R Summers 'Common-law Remedies for Environmental Protection' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 339 – 369 for a discussion of civil measures.

and alternative compliance measures.⁶⁵¹ Each measure has its benefits and shortfalls, and these will be explored further in the discussion below.⁶⁵²

2.1 Criminal Measures

Criminal sanctions are the default enforcement measure in legislation regulating the One Environmental System.⁶⁵³ Legislation such as the National Environmental Management Act⁶⁵⁴ (NEMA) prohibit certain conduct that causes harm to the environment and imposes criminal sanctions for contravention of its provisions.⁶⁵⁵

The main aim of imposing criminal sanctions is to deter non-compliance.⁶⁵⁶ Offenders are deterred from future non-compliance if there is a high probability of detection and a significant penalty attached.⁶⁵⁷ To deter non-compliance, regulated persons must be made aware of the sanctions as “ultimately, one cannot fear what turns to be a paper threat.”⁶⁵⁸ A lack of enforcement promotes disrespect for the law, which leads to contravention.⁶⁵⁹ It is also important for the penalty to be proportional to the harm caused.⁶⁶⁰ If authorities use heavy penalties to punish relatively minor offences, regulated persons will disrespect the law as the legal system will be viewed as responding to offenders inappropriately.⁶⁶¹ However, if penalties are too low, the aim of deterrence is compromised.⁶⁶²

⁶⁵¹ RI McMurray & SD Ramsey ‘Environmental Crime: The Use of Criminal Sanctions in Enforcing Environmental Law’ (1986) 19 *Loyola of Los Angeles Law Review* 1134.

⁶⁵² Kidd (2002) *SAJELP* 26 27 – 28.

⁶⁵³ Kidd *Environmental Law* 269; A Paterson & LJ Kotze ‘Towards a more Effective Environmental Compliance and Enforcement Regime for South Africa’ in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa Legal Perspectives* (2009) 375.

⁶⁵⁴ National Environmental Management Act 107 of 1998 (hereinafter NEMA).

⁶⁵⁵ M Kidd ‘Criminal Measures’ in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 259.

⁶⁵⁶ JT Scholz ‘Cooperation, Deterrence and the Ecology of Regulatory Enforcement’ (1984) 18 *Law and Society Review* 183; S Terblanche ‘Sentencing’ (2018) 3 *SACJ* 465; HL Packer *The Limits of the Criminal Sanction* (1968) 356.

⁶⁵⁷ C Rechtschaffen & DL Markell *Reinventing Environmental Enforcement and the State/Federal Relationship* (2003) 60 – 61; C Reasons ‘Crimes Against the Environment: Some Theoretical and Practical Concerns’ (1991) 34 *Criminal Law Quarterly* 97; CR Snyman *Criminal Law* 6 ed (2014) 15.

⁶⁵⁸ S Smith ‘An Iron Fist in a Velvet Glove: Redefining the Role of Criminal Prosecution in Creating an Effective Environmental Enforcement System’ (1995) 19 *Criminal Law Journal* 14; D Farrier ‘In Search of Real Criminal Law’ in T Bonyhady (ed) *Environmental Protection and Legal Change* (1992) 96.

⁶⁵⁹ A Ashworth *Principle of Criminal Law* (1991) 28.

⁶⁶⁰ *S v Malgas* 2001 (1) SACR 469 (SCA) para 9; S Terblanche ‘Sentencing’ (2009) 22 *SACJ* 131; A van der Merwe ‘Sentencing’ (2016) 29 *SACJ* 371; J Adreoni ‘Reasonable Doubt and the Optimal Magnitude of Fines: Should the Penalty Fit the Crime?’ (1991) 22 *The Rand Journal of Economics* 394; Snyman *Criminal Law* 13.

⁶⁶¹ *S v Heuwel* 2018 (2) SACR 436 (WCC) para 15; Terblanche (2018) *SACJ* 468.

⁶⁶² Kidd ‘Criminal Measures’ in *Environmental Compliance and Enforcement in South Africa* 242.

Because deterrence can be achieved by means other than criminal measures, it is important to consider when it is appropriate to use criminal measures and when to use other measures.⁶⁶³

Setting out the benefits and shortfalls of criminal measures provides guidance in this regard.⁶⁶⁴

As highlighted above, deterring non-compliance by using penalties seems to be the main benefit of criminal measures.⁶⁶⁵ Because criminal sanctions are the harshest of all measures, they are usually imposed for grave offences where alternative measures would be insufficient.⁶⁶⁶ Although cited less often than deterrence, retribution is also considered to be a benefit of criminal measures from an enforcement perspective.⁶⁶⁷ Retribution refers to society's condemnation of certain conduct thus attaching a criminal stigma to offenders.⁶⁶⁸

Notwithstanding the benefits mentioned, criminal sanctions are fraught with shortfalls.⁶⁶⁹ Enforcing them is resource intensive and time consuming because authorities must engage in litigation before sanctions are imposed.⁶⁷⁰ Authorities have a heavy burden of proof to discharge in that an offender's guilt must be proven beyond a reasonable doubt in a criminal matter.⁶⁷¹ Critics of criminal sanctions also note that such measures address a harm that has already occurred as opposed to stopping it before it occurs.⁶⁷² Other shortfalls that exist include a lack of inspectors, difficulties in investigations and a lack of expertise by court officials, such as prosecutors.⁶⁷³

On consideration of the benefits and shortfalls of criminal sanctions, it is plausible to find that the use of criminal sanctions should be reserved for serious offences that require heavy penalties.⁶⁷⁴ In the interests of efficiency and cost effectiveness, less serious offences should

⁶⁶³ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 242.

⁶⁶⁴ Kidd *Environmental Law* 270.

⁶⁶⁵ Scholz (1984) *Law and Society Review* 183; Terblanche (2018) *SACJ* 465.

⁶⁶⁶ J Braithwaite 'Reward and Regulation' (2002) 29 *Journal of Law and Society* 20.

⁶⁶⁷ DN Husak 'Retribution in Criminal Theory' (2000) 37 *San Diego Law Review* 959; Snyman *Criminal Law* 12.

⁶⁶⁸ R Wertheimer 'Understanding Retribution' (1983) 19 *Criminal Justice Ethics* 23; Snyman *Criminal Law* 13.

⁶⁶⁹ GJ Stigler 'The Optimum Enforcement of Laws' in GS Becker & WM Landes (eds) *Essays in the Economics of Crime and Punishment* (1974) 56; M Jefferson 'Corporate Liability: The problem of Sanction' (2001) 65 *The Journal of Criminal Law* 238.

⁶⁷⁰ Stigler 'Optimum Enforcement of Laws' in *Essays in the Economics of Crime and Punishment* 56; M Kidd 'Environmental Crime – Time for a Rethink in South Africa?' (1998) 5 *SAJELP* 189.

⁶⁷¹ Snyman *Criminal Law* 102; J Burchell *Principles of Criminal Law* 5 ed (2016) 116; Although not discussed in this chapter, there is a lesser burden of proof to discharge in a civil matter in that fault must be established on a balance of probabilities.

⁶⁷² Snyman *Criminal Law* 11; C Abbot *Enforcing Pollution Control Regulation Strengthening Sanctions and Improving Deterrence* (2009) 42; C Rechtschaffen 'Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement' (1998) 71 *Southern California Law Review* 1188; TF Malloy 'Regulation, Compliance and the Firm' (2003) 76 *Temple Law Review* 454.

⁶⁷³ C Loots 'Making Environmental Law Effective' (1994) 1 *SAJELP* 17 – 18; Kidd *Environmental Law* 71 – 73.

⁶⁷⁴ Packer *The Limits of the Criminal Sanction* 250; Braithwaite (2002) *Journal of Law and Society* 20; Terblanche (2018) *SACJ* 465.

be penalised with alternative enforcement measures.⁶⁷⁵ This is a compelling argument. However, it begs the question: what are the most serious environmental offences?⁶⁷⁶

Three categories of conduct qualify as a serious offence.⁶⁷⁷ First, criminal sanctions must be reserved for conduct that amounts to intentional wrongdoing.⁶⁷⁸ In the context of mining, such conduct includes acid mine drainage, deliberately clearing vegetation without environmental authorisation and a failure to comply with notices or directives.⁶⁷⁹ Secondly, criminal sanctions must be used where there is perpetual wrongdoing.⁶⁸⁰ This occurs when an offender repeatedly fails to comply with regulations despite being made aware of how his conduct harms the environment.⁶⁸¹ Thirdly, criminal sanctions should be imposed where the offender negligently causes serious harm to people or the environment.⁶⁸² The above is not a closed list; thus, officials may consult relevant laws to determine whether certain conduct qualifies as a serious offence thus warranting a criminal sanction.⁶⁸³

This discussion proceeds on the premise that the intentional and negligent contravention of environmental laws, which results in serious harm to the environment, must be met with criminal sanctions.⁶⁸⁴ Fines and imprisonment are the most commonly used criminal sanctions.⁶⁸⁵ The discussion below however does not delve into imprisonment. It focuses on fines as the scope of this chapter is limited to the sentencing of juristic persons, such as mining companies, since they cannot be imprisoned.⁶⁸⁶

The decision to limit the discussion to the measures used to punish mining companies is informed by a number of reasons. Although not the only source, corporate entities are a major source of environmental degradation and manage some of the most dangerous types of

⁶⁷⁵ Braithwaite (2002) *Journal of Law and Society* 20.

⁶⁷⁶ Packer *The Limits of the Criminal Sanction* 250.

⁶⁷⁷ Kidd (2002) *SAJELP* 26; Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 243; K Hawkins *Environment and Enforcement: Regulation and the Social Definition of Pollution* (1984) 201.

⁶⁷⁸ N Shover & AS Routh 'Environmental Crime' (2005) 32 *Crime and Justice* 324; N Gunningham 'Enforcing Environmental Regulation' (2011) 23 *Journal of Environmental Law* 178; Hawkins *Environment and Enforcement* 201.

⁶⁷⁹ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 243.

⁶⁸⁰ Gunningham (2011) *Journal of Environmental Law* 178; Hawkins *Environment and Enforcement* 201.

⁶⁸¹ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 243.

⁶⁸² Gunningham (2011) *Journal of Environmental Law* 178; Hawkins *Environment and Enforcement* 201.

⁶⁸³ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 243.

⁶⁸⁴ Gunningham (2011) *Journal of Environmental Law* 178; Packer *The Limits of the Criminal Sanction* 250.

⁶⁸⁵ JD Wilson 'Re-thinking Penalties for Corporate Environmental Offenders: A View of the Law Reform Commission of Canada's Sentencing in Environmental Cases' (1986) 31 *McGill Law Journal* 314; EM Fromm 'Commanding respect: Criminal Sanctions for Environmental Crimes' (1990) 21 *St. Mary's Law Journal* 822.

⁶⁸⁶ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa*; Jefferson (2001) *The Journal of Criminal Law* 235.

pollutants.⁶⁸⁷ They have vast economic and political power.⁶⁸⁸ Having extensive resources means that they can reduce pollution and prevent other harms to the environment.⁶⁸⁹

2.1.1 Fines

NEMA provides that a fine may be imposed on an offender who causes harm to the environment.⁶⁹⁰ These fines range between R5 million and R10 million.⁶⁹¹ To supplement the penalty of a fine, the law provides for other forms of fines and alternative penalties.⁶⁹²

There is provision in the law for a “fine for continuing offences” which may be imposed for every day that an offence continues.⁶⁹³ This measure is imposed to encourage an offender to stop the contravention as a matter of urgency.⁶⁹⁴ An offender may also be imposed with a fine which is either equivalent to the benefit gained⁶⁹⁵ or three times the value of the benefit gained from the offence.⁶⁹⁶ The recovery of monetary gain from offenders is an important deterrent for offenders involved in crimes motivated by profit, such as illegal diamond mining.⁶⁹⁷

Fines have been criticised as an inadequate enforcement measure as corporates are often able to simply write off fines as a cost of doing business.⁶⁹⁸ Such disregard for fines undermines the deterrent and retributive aims of criminal sanctions because the associated stigma is simply absorbed as a cost of doing business.⁶⁹⁹ The resultant costs usually fall on shareholders who had no part in committing the offence or consumers and employees of the corporate entity.⁷⁰⁰

⁶⁸⁷ D Saxe *Environmental Offences: Corporate Responsibility and Executive Liability* (1990) 21; Wilson (1986) *McGill Law Journal* 314.

⁶⁸⁸ Saxe *Environmental Offences* 21.

⁶⁸⁹ Saxe *Environmental Offences* 21.

⁶⁹⁰ Section 49B NEMA.

⁶⁹¹ Section 49B NEMA.

⁶⁹² Adjustment of Fines Act 101 of 1991 provides for maximum fines set out in legislation to be adjusted if they are found to be inadequate. The provisions of this Act may be invoked whether a fine has (section 1(b)) or has not (section 1(a)) been legislatively determined.

⁶⁹³ Section 51(3) National Heritage Resources Act 25 of 1999.

⁶⁹⁴ Kidd ‘Criminal Measures’ in *Environmental Compliance and Enforcement in South Africa* 260.

⁶⁹⁵ Section 34(3) NEMA; see also section 52(1)(b)(ii) of the National Environmental Management: Air Quality Act 39 of 2004.

⁶⁹⁶ Section 102(2)(b) of the National Environmental Management: Biodiversity Act 10 of 2004.

⁶⁹⁷ Kidd ‘Criminal Measures’ in *Environmental Compliance and Enforcement in South Africa* 261.

⁶⁹⁸ Jefferson (2001) *The Journal of Criminal Law* 238.

⁶⁹⁹ Jefferson (2001) *The Journal of Criminal Law* 238.

⁷⁰⁰ NJ Reville ‘The Shifting Sands of Manslaughter’ (1991) 55 *Journal of Criminal Law* 233.

2.1.2 Alternative penalties

The law provides for penalties other than fines.⁷⁰¹ These penalties include compensation orders, reparation orders, forfeiture orders and the revocation of licences and permits.⁷⁰² The following discussion focuses on such penalties.

The law empowers criminal courts to issue compensation orders.⁷⁰³ If an offender is convicted of an offence that results in a loss or harm to a person, the court has the power to calculate the loss suffered and order compensation to the victim.⁷⁰⁴ The victim concerned may be the state or any aggrieved person.⁷⁰⁵ The benefit of a compensation order granted in favour of the state is that it presents an opportunity for the state to remedy the environmental degradation at the cost of the offender.⁷⁰⁶ Such a measure is cost-effective for authorities and improves the efficiency of enforcement as it removes the need for the matter to be tried in a civil court to determine compensation.⁷⁰⁷ Another measure that promotes remediation of environmental degradation is a reparation order.⁷⁰⁸ Instead of ordering an offender to pay compensation, a reparation order requires the offender to remedy the harm.⁷⁰⁹ It may be granted simultaneously with a compensation order should the offender fail to honour the reparation order.⁷¹⁰

An effective criminal enforcement measure is the forfeiture of items from an offender.⁷¹¹ Such items include objects illegally obtained (such as diamonds), the instruments used to commit the offence (such as trucks), and objects directly used to commit the offence (such as tools to clear vegetation).⁷¹² It seems plausible to order the forfeiture of objects illegally obtained and those directly used to commit the offence.⁷¹³ However, it has been argued that forfeiting the instruments of an offence may be unfair and excessive and that a link between the instrument

⁷⁰¹ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 260.

⁷⁰² Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 261 – 63.

⁷⁰³ Section 300 Criminal Procedure Act 51 of 1977.

⁷⁰⁴ Sections 34(1) & (2) NEMA.

⁷⁰⁵ Sections 34(2) NEMA.

⁷⁰⁶ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 261.

⁷⁰⁷ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 260.

⁷⁰⁸ Section 51(8) of the National Heritage Resources Act 25 of 1999.

⁷⁰⁹ Section 51(8) of the National Heritage Resources Act 25 of 1999.

⁷¹⁰ Section 51(8) of the National Heritage Resources Act 25 of 1999.

⁷¹¹ A van der Walt 'Civil Forfeiture of Instrumentalities and Proceeds of Crime and the Constitutional Property Clause' (2000) 16 *SA Journal on Human Rights* 2; see section 68 of the Marine Living Resources Act 18 of 1998.

⁷¹² Section 34D NEMA, see also section 68 of the Marine Living Resources Act 18 of 1998 and section 18(2).

⁷¹³ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 262.

and the offence must first be established before a sanction is imposed.⁷¹⁴ If an instrument is only used incidentally in committing the offence, then forfeiture should not be ordered.⁷¹⁵

As a measure of last resort, a court may revoke a licence or permit if the holder of such a right contravenes the terms agreed on upon issue.⁷¹⁶ Provision for this measure in environmental legislation is on the increase and perhaps it should become a standard provision in any law that provides for licences and permits.⁷¹⁷

2.1.3 Corporate-specific penalties

In addition to the aforementioned sanctions, the legislature should consider making provision for corporate-specific penalties. For instance, corporate offenders should be penalised using managerial intervention and adverse publicity orders.⁷¹⁸ A brief description of the proposed measures follows.

A court should be empowered to make an order for managerial intervention by calling for internal discipline and reform within the corporation.⁷¹⁹ Internal disciplinary action involves the corporation investigating the offence and holding the appropriate individuals accountable.⁷²⁰ Organisational reform would require the corporation to implement or change policies or procedures to prevent future violations.⁷²¹

Another creative way of holding corporates accountable for environmental violations is by making provision for adverse publicity orders.⁷²² Since corporations are profit maximisers, the prestige of a corporation lies largely in its financial success.⁷²³ A possible enforcement measure would be to order a corporate offender to publicise its conviction in a manner prescribed by the court.⁷²⁴ In addition, the offender must cover the cost of the adverse publicity.⁷²⁵ This sanction

⁷¹⁴ van der Walt (2000) *SA Journal on Human Rights* 7.

⁷¹⁵ *S v Vermeulen* 1995 (2) SACR 439 (T) 441.

⁷¹⁶ Section 34C NEMA.

⁷¹⁷ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 262; see section 28 of the Marine Living Resources Act 18 of 1998 and section 58(8) of the National Forests Act 30 of 1998.

⁷¹⁸ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 263.

⁷¹⁹ M Kidd 'Sentencing Environmental Crimes' (2004) 11 *SAJELP* 70; Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 264.

⁷²⁰ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 264.

⁷²¹ Kidd (2004) *SAJELP* 71.

⁷²² E Gellhorn 'Adverse Publicity by Administrative Agencies' (1973) 86 *Harvard Law Review* 1381.

⁷²³ HA Simon *Models of Bounded Rationality: Behavioural Economics and Business Organisation* (1982) 291; DM Kreps *A Course in Microeconomic Theory* (1990) 724; E Sutherland *White-Collar Crime: The Uncut Version* (1983) 236.

⁷²⁴ NJ Stranz 'Case Comment: *R v Bata Industries Ltd*' (1993) 31 *Alberta Law Review* 730; see section 291(1)(g) of the Canadian Environmental Protection Act of 1987.

⁷²⁵ Section 291(2) of the Canadian Environmental Protection Act of 1987.

could be used in place of or in addition to other measures.⁷²⁶ Such an order could give effect to the deterrent and retributive aims of criminal sanctions.⁷²⁷

2.2 Administrative Measures

Administrative measures have an important role to play in the enforcement of the One Environmental System.⁷²⁸ They empower authorised officials to direct offenders to comply with the law and, in cases of breach, to remedy the environmental damage.⁷²⁹ Unlike criminal measures, administrative measures are implemented by authorised officials and not by courts.⁷³⁰ The available administrative measures include directives, compliance notices and the withdrawal of authorisations.⁷³¹

Administrative measures may supplement or replace criminal measures.⁷³² As previously suggested, criminal sanctions should be reserved for serious offences.⁷³³ Although less harsh than criminal measures, administrative measures can be more effective in securing compliance.⁷³⁴ Their effectiveness stems from a number of reasons. First, the officials authorised to issue them are given wide discretion to ensure enforcement that is specific to each situation.⁷³⁵ Secondly, they are cost effective in that legislation empowers various officials to enforce them without relying on courts.⁷³⁶ Thirdly, the authorised officials have the expertise to secure compliance with relevant environmental laws in a specific manner that non-specialist courts would not be equipped to.⁷³⁷

The effective use of administrative measures depends on the proper training of officials authorised to use them and the political will to use them.⁷³⁸ Historically, these two factors are

⁷²⁶ Section 291(1) of the Canadian Environmental Protection Act of 1987.

⁷²⁷ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 264.

⁷²⁸ M Fourie 'How Civil and Administrative Penalties can Change the Face of Environmental Compliance in South Africa' (2009) 16 *SAJELP* 94.

⁷²⁹ T Winstanley 'Administrative Measures' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 225.

⁷³⁰ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 56.

⁷³¹ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 55. The term authorisations, in the context of this chapter, refers to all entitlements including licences, permits and exemptions.

⁷³² Fourie (2009) *SAJELP* 117.

⁷³³ Packer *The Limits of the Criminal Sanction* 250; Braithwaite (2002) *Journal of Law and Society* 20; Terblanche (2018) *SACJ* 465.

⁷³⁴ Fourie (2009) *SAJELP* 117.

⁷³⁵ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 226.

⁷³⁶ Kidd (2002) *SAJELP* 33.

⁷³⁷ Kidd (2002) *SAJELP* 33.

⁷³⁸ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 226.

said to have been lacking in the enforcement of environmental laws.⁷³⁹ However, there has been positive change in the form of increased enforcement since the appointment and training of environmental management inspectors.⁷⁴⁰ This section analyses the use of various administrative measures, the empowering legislation, the officials authorised to enforce them, the consequences of not complying with them as well as their advantages and disadvantages.

2.2.1 Directives

Directives are provided for in various legislation.⁷⁴¹ However, for purposes of this discussion, the focus is on directives issued under section 28 of NEMA and section 19 of the National Water Act (NWA).⁷⁴² These provisions empower a competent authority to, not only direct a person to take steps to prevent environmental damage, but to also remedy the harm.⁷⁴³ Particular consideration is given to these statutes because they are the key laws in the One Environmental System.⁷⁴⁴

Directives under NEMA and the NWA are applicable when there is a breach of the duty of care.⁷⁴⁵ These statutes impose a duty on any person involved in activities that result in environmental harm to take reasonable measures to prevent the harm.⁷⁴⁶ Where one fails to take reasonable measures to prevent the harm, a competent authority may direct them to do so.⁷⁴⁷ Reasonable measures are specified in the legislation and include investigating, stopping and remedying environmental harm.⁷⁴⁸

The competent authority for issuing directives under NEMA is the Director-General of the Department of Environment, Forestry and Fisheries (DEFF) or the head of the provincial environmental department.⁷⁴⁹ The competent authority for issuing directives under the NWA is a catchment management agency or, where such authority does not exist, the Minister of Water Affairs.⁷⁵⁰ Notably, local authorities, such as municipalities, are not empowered to use

⁷³⁹ Fourie (2009) *SAJELP* 117.

⁷⁴⁰ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 226.

⁷⁴¹ See section 45 of the Mineral and Petroleum Resources Development Act 28 of 2002; see also section 31A of the Environment Conservation Act 73 of 1989 – Majority of the provisions of this Act have been repealed by NEMA, however section 31A is one of the provisions which still remains in effect.

⁷⁴² National Water Act 36 of 1998 (hereinafter NWA).

⁷⁴³ Soltau (1999) *SAJELP*. The term competent authority, in the context of this chapter, refers to the officials authorised by legislation to enforce measures.

⁷⁴⁴ Section 50A NEMA; section 163A NWA.

⁷⁴⁵ Section 28 NEMA; section 19 NWA.

⁷⁴⁶ F Feris 'Compliance Notices – A New Tool in Environmental Enforcement' (2006) 9 *PELR* 54.

⁷⁴⁷ Section 28(4) NEMA; Section 19(3) NWA.

⁷⁴⁸ Section 28(3) NEMA; Section 19(2) NWA.

⁷⁴⁹ Section 28(4) NEMA.

⁷⁵⁰ Section 19(3) read with section 72 NWA.

these administrative measures.⁷⁵¹ This dispensation is rather unfortunate given that local government is usually the first to identify environmental damage and faces the adverse consequences, more so where the harm affects service delivery, like the supply of potable water.⁷⁵²

There are a range of consequences that flow from non-compliance with a directive. Where a person fails to take reasonable measures in terms of NEMA or the NWA, the competent authority may take the instructed measures and recover the costs from the person.⁷⁵³ The costs may be recovered from the person responsible for the harm, the owner or person with a right to use the land at the time the harm was caused, or any person who failed negligently in preventing the harm from occurring.⁷⁵⁴ Failure to comply with a directive may lead to one being issued with a compliance notice in terms of NEMA.⁷⁵⁵ This administrative measure is discussed in further detail below.

Among the consequences that flow from a failure to comply with a directive under NEMA, a criminal offence is not one of them.⁷⁵⁶ Therefore, non-compliance with a directive cannot be addressed using criminal proceedings.⁷⁵⁷ The competent authority may however institute civil litigation to apply for an interdict to order compliance with the directive.⁷⁵⁸ Despite the position under NEMA, non-compliance with a directive can amount to a criminal offence under the NWA.⁷⁵⁹ In essence, the directive issued under the NWA is more functional than the one issued under NEMA because it may be enforced through criminal proceedings. The result of a conviction for non-compliance with a directive is a fine or imprisonment.⁷⁶⁰

An analysis of the discussion above reveals the advantages and disadvantages of directives. Among the advantages is the fact that competent authorities are empowered to specify the measures that best suit each situation.⁷⁶¹ Thus, because they are tailored to each situation, they are more effective than other forms of enforcement measures, such as criminal sanctions.⁷⁶²

⁷⁵¹ Section 31A(2) of the Environment Conservation Act 73 of 1989 however empowers local authorities to issue directives.

⁷⁵² Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 228.

⁷⁵³ Section 28(7) & (8) NEMA; Section 19(4) & (5) NWA.

⁷⁵⁴ Section 28(8) NEMA; Section 19(5) NWA.

⁷⁵⁵ Section 31L NEMA.

⁷⁵⁶ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 232.

⁷⁵⁷ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 232.

⁷⁵⁸ Summers 'Common-law Remedies for Environmental Protection' in *Environmental Compliance and Enforcement in South Africa* (2009) 346 for a discussion of interdicts.

⁷⁵⁹ Section 151(1)(d) NWA.

⁷⁶⁰ Section 151(2) NWA.

⁷⁶¹ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 233.

⁷⁶² Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 232.

Surprisingly, a directive may be issued where a harmful activity is legally authorised.⁷⁶³ Furthermore, a directive is applicable even where a harmful activity is not regulated, such as activities not listed under NEMA as requiring an environmental impact assessment.⁷⁶⁴ Finally, directives do not require litigation, thus are cost-effective and can be used in emergencies.⁷⁶⁵ Due to its effectiveness as an enforcement measure, this discussion notes one disadvantage of directives. The fact that non-compliance under NEMA does not constitute a criminal offence may be viewed as a disadvantage.⁷⁶⁶ However, this limitation may be countered by either resorting to civil litigation to obtain an interdict or criminal litigation under the NWA.⁷⁶⁷

2.2.2 Notices

A compliance notice, as the name suggests, is a measure used to secure compliance from someone who has defaulted.⁷⁶⁸ The competent authority to issue compliance notices is a designated environmental management inspector (inspector).⁷⁶⁹ These notices are issued where the competent authority reasonably believes that a person has not complied with the law or a permit.⁷⁷⁰ The compliance notice must include details of the non-compliant act, measures that must be taken and the time within which they must be taken to achieve compliance.⁷⁷¹

Failure to heed a compliance notice constitutes a criminal offence that may lead to the withdrawal or amendment of the permit concerned.⁷⁷² If the defaulting party fails to take the steps specified in the compliance notice, the competent authority may take the prescribed steps and recover the costs from the offender.⁷⁷³

The law also provides for a notice to withdraw an authorisation.⁷⁷⁴ Where an activity is regulated by an authorisation and its conditions have been breached, a competent authority is empowered to give notice of the breach and that it should be remedied.⁷⁷⁵ A failure to remediate the breach may lead to withdrawal of the authorisation.⁷⁷⁶ A number of statutes in South

⁷⁶³ Section 28(1) NEMA.

⁷⁶⁴ GN R386 and GN R387 in *Government Gazette* 28753 of 21 April 2006.

⁷⁶⁵ Kidd (2002) *SAJELP* 33.

⁷⁶⁶ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 233.

⁷⁶⁷ Summers 'Common-law Remedies for Environmental Protection' in *Environmental Compliance and Enforcement in South Africa* (2009) 346; section 151(1)(d) NWA.

⁷⁶⁸ Feris (2006) *PELR* 55.

⁷⁶⁹ Section 31L NEMA.

⁷⁷⁰ Section 31L(1) NEMA.

⁷⁷¹ Section 31L(2) NEMA.

⁷⁷² Section 31N NEMA.

⁷⁷³ Section 31N(2)(b) NEMA.

⁷⁷⁴ Kidd (2002) *SAJELP* 33.

⁷⁷⁵ Section 54(3) NWA.

⁷⁷⁶ Section 54(3) NWA.

African environmental law make provision for such power.⁷⁷⁷ One such provision is found in NEMA and provides for the withdrawal of an environmental authorisation.⁷⁷⁸ If an offender continues with the permitted activity, which is the subject of the withdrawn authorisation, an interdict may be sought against him.⁷⁷⁹

Notices have been welcomed as an effective enforcement measure for environmental laws.⁷⁸⁰ The benefit of using this measure is that it can be issued relatively fast by a designated inspector.⁷⁸¹ However, inspectors can only issue notices in respect of conduct when so mandated by legislation.⁷⁸² Legislators should therefore ensure the designation of inspectors in an array of legislation to ensure effective environmental enforcement.⁷⁸³ The designation should be accompanied by appropriate training and the will to secure compliance.⁷⁸⁴

2.2.3 Administrative Penalties

An administrative penalty is a monetary sanction that is imposed on a violator of environmental law, not by a court, but by an authorised official.⁷⁸⁵ It is a fairly new measure in the enforcement of environmental law in South Africa specifically.⁷⁸⁶ More generally, the Criminal Procedure Act has, for many years, made provision for the admission-of-guilt fine.⁷⁸⁷ NEMA recently introduced its own admission-of-guilt fine.⁷⁸⁸

An administrative penalty is now available under NEMA in the form of an admission fine.⁷⁸⁹ This measure is specifically available when a person unlawfully conducts a listed activity without an environmental authorisation then applies for rectification.⁷⁹⁰ The admission fine could cost the violator up to R5 million.⁷⁹¹ The application to rectify the wrongful conduct and to be issued with an environmental authorisation may only be considered after the fine has been

⁷⁷⁷ Section 54 NWA; see also section 28 Marine Living Resources Act 18 of 1998.

⁷⁷⁸ Regulation 47 – 50 of GN R385 in *Government Gazette* 28753 of April 2006.

⁷⁷⁹ Kidd (2002) *SAJELP* 36.

⁷⁸⁰ Feris (2006) *PELR* 68.

⁷⁸¹ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 235.

⁷⁸² Section 31L read with section 31D NEMA empower inspectors to issue compliance notices in relation to conduct regulated under NEMA and all specific environmental management Acts which include the National Environmental Management: Protected Areas Act 57 of 2003, the National Environmental Management: Biodiversity Act 10 of 2004 and the National Environmental Management: Air Quality Act 39 of 2004.

⁷⁸³ Feris (2006) *PELR* 63.

⁷⁸⁴ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 235.

⁷⁸⁵ Fourie (2009) *SAJELP* 93; Kidd (2002) *SAJELP* 36.

⁷⁸⁶ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 237.

⁷⁸⁷ Section 57 of the Criminal Procedure Act 51 of 1977.

⁷⁸⁸ Section 34G NEMA.

⁷⁸⁹ Section 24G(4) NEMA; see section 55A of the Mine Health and Safety Act 29 of 1996 which provides for an administrative fine.

⁷⁹⁰ Section 24G(1) NEMA.

⁷⁹¹ Section 24G(4) NEMA

paid.⁷⁹² Such a measure is a powerful disincentive to corporations intending on engaging in unlawful conduct.⁷⁹³

There is an important difference between admission-of-guilt fines and admission fines. Unlike an admission fine, an admission-of-guilt fine is a criminal measure.⁷⁹⁴ The initial imposition of both fines is similar. As is the case for admission fines, the provisions for admission-of-guilt fines empower an authorised official to issue an accused with a summons to appear in court or pay a fine before a specified date.⁷⁹⁵ Resolving to pay the fine negates the need to appear in court.⁷⁹⁶

The difference between the two aforementioned measures becomes evident when a contravention is disputed by the recipient of the fine.⁷⁹⁷ Where a contravention is disputed, the burden of proof differs.⁷⁹⁸ If an admission-of-guilt fine is disputed, the prosecution must prove the contravention beyond a reasonable doubt in a criminal court.⁷⁹⁹ However, where an admission fine is disputed, the offender must prove his case using the appeal process provided for in NEMA.⁸⁰⁰ A disputed admission fine may also be taken on review if issuing it is shown to be an administrative action.⁸⁰¹

Administrative fines have been hailed as an effective and feasible measure to enforce compliance with environmental laws.⁸⁰² Their obvious advantage is that they may be imposed by an authorised official without recourse to a court. Preference is given to them over criminal measures as they are said to be more cost effective and easier to impose.⁸⁰³ It can be argued that a disputed admission fine will require equal resources as an admission-of-guilt fine to be litigated.⁸⁰⁴ However, Kidd provides empirical evidence showing that administrative fines are imposed successfully more often than penalties through other measures because of their ease

⁷⁹² Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 238.

⁷⁹³ Winstanley 'Administrative Measures' *Environmental Compliance and Enforcement in South Africa* 238.

⁷⁹⁴ Fourie (2009) *SAJELP* 94.

⁷⁹⁵ Section 57 read with section 54 of the Criminal Procedure Act 51 of 1977.

⁷⁹⁶ Section 57 of the Criminal Procedure Act 51 of 1977.

⁷⁹⁷ Fourie (2009) *SAJELP* 94.

⁷⁹⁸ Kidd (2002) *SAJELP* 38.

⁷⁹⁹ Section 54 of the Criminal Procedure Act 51 of 1977.

⁸⁰⁰ Section 43 NEMA.

⁸⁰¹ J Glazewski, P Snijman & L Plit 'Compliance with and Enforcement of Environmental Laws' in J Glazewski *Commentary on Environmental Law in South Africa* 16; C Hoexter 'Administrative Law in South Africa' 2 ed (2012) 108.

⁸⁰² Fourie (2009) *SAJELP* 93.

⁸⁰³ Fourie (2009) *SAJELP* 93.

⁸⁰⁴ Kidd (2002) *SAJELP* 38.

of use.⁸⁰⁵ Their ease lies in that they are seldom disputed because they do not result in a criminal record for its recipients as is the case for an admission-of-guilt fine.⁸⁰⁶ When a dispute does arise, the burden of proof lies with the recipient of the fine, thus resulting in a lesser strain on authorised officials to litigate using already overburdened governmental resources.⁸⁰⁷

Because an admission fine under NEMA is limited to R5 million, this measure should be reserved for relatively minor contraventions.⁸⁰⁸ Serious offences can be penalised with criminal measures which make provision for heftier fines between R5 million and R10 million.⁸⁰⁹

3 Alternative Compliance and Enforcement Measures

The One Environmental System contains several measures to ensure compliance.⁸¹⁰ However, some measures have not been used to their full potential.⁸¹¹ The traditional command-and-control measures discussed above have been criticised as being misapplied or unduly relied on.⁸¹² Resultantly, alternative compliance and enforcement measures have been left unused because their practical application remains uncertain.⁸¹³ The discussion below explores measures other than command-and-control and their potential to complement the traditional measures.

A shift towards alternative measures is noticeable and can be ascribed to the inability of command-and-control measures to secure consistent compliance.⁸¹⁴ The scope of this research does not permit a discussion of all the available alternative compliance and enforcement measures. The range of alternative measures is complex and dynamic, thus an attempt to explore all such measures will prove arbitrary.⁸¹⁵ The following discussion is therefore limited

⁸⁰⁵ M Kidd *The Protection of the Environment through the Use of Criminal Sanctions: A Comparative Analysis with Specific Reference to South Africa* (unpublished PhD Thesis, University of KwaZulu Natal, 2002) 291.

⁸⁰⁶ Fourie (2009) *SAJELP* 93.

⁸⁰⁷ Kidd (2002) *SAJELP* 37.

⁸⁰⁸ Kidd *Protection of the Environment* 293.

⁸⁰⁹ Section 49B NEMA; Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 243.

⁸¹⁰ A Paterson 'Incentive-based Measures' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 296.

⁸¹¹ Abbot *Enforcing Pollution Control Regulation* 4.

⁸¹² JG Nel & JA Wessels 'How to use Voluntary, Self-regulatory and Alternative Environmental Compliance Tools: Some Lessons Learnt' (2010) 13 *PELR* 49; Chapter 4, part 2 of this dissertation.

⁸¹³ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 296.

⁸¹⁴ Nel & Wessels (2010) *PELR* 49. Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 58.

⁸¹⁵ Nel & Wessels (2010) *PELR* 50.

to voluntary compliance measures and incentive-based measures as South African policy-makers have focused on these.⁸¹⁶

Compliance and enforcement measures are best understood as lying along a spectrum with command-and-control measures at one end and voluntary compliance measures at the other end.⁸¹⁷ Half way between these two poles lies incentive-based measures.⁸¹⁸ As already noted, command-and-control measures involve the prescription of laws that must be complied with and enforced by authorised officials.⁸¹⁹ Voluntary compliance measures are set by industries using standards to achieve objectives that they have prescribed for themselves with little state involvement.⁸²⁰ Incentive-based measures aim to encourage compliance with laws and voluntary standards through motivation and reward, rather than relying on sanctions.⁸²¹

3.1 Voluntary Compliance Measures

Voluntary compliance measures are those taken by corporations of their own free will to limit the harmful environmental impact of their businesses.⁸²² Voluntary compliance measures are not required by law and operate with limited involvement from enforcement authorities.⁸²³ These measures are governed by standards with which corporations may choose whether or not to comply.⁸²⁴ Non-compliance therewith does not trigger the imposition of a sanction.⁸²⁵ The effective implementation of voluntary compliance measures depends on the self-discipline of corporations to comply, thereby reducing the dependency on overburdened governmental resources for enforcement.⁸²⁶

⁸¹⁶ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 58; Nel & Wessels (2010) *PELR* 50; National Treasury 'Draft Policy Paper: A Framework for Considering Market-based Instruments to Support Environmental Fiscal Reform in South Africa' (2006) 70 available at <http://www.treasury.gov.za/public%20comments/Draft%20Environmental%20Fiscal%20Reform%20Policy%20Paper%206%20April%202006.pdf>, accessed on 03 June 2019.

⁸¹⁷ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 298.

⁸¹⁸ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 298.

⁸¹⁹ Chapter 4, part 2 of this dissertation.

⁸²⁰ C Hilson *Regulating Pollution* (2000) 105.

⁸²¹ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 58.

⁸²² K Lehmann 'Voluntary Compliance Measures' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 269.

⁸²³ C Hilson *Regulating Pollution* (2000) 105.

⁸²⁴ Nel & Wessels (2010) *PELR* 51.

⁸²⁵ Lehmann 'Voluntary Compliance Measures' in *Environmental Compliance and Enforcement in South Africa* 269.

⁸²⁶ Hilson *Regulating Pollution* 105.

Voluntary compliance measures have gained increasing prominence in South Africa as they are said to be more cost-effective than command-and-control measures.⁸²⁷ Instead of relying on state resources to gather information and develop it into regulations that must be enforced, voluntary compliance measures use industry knowledge and resources.⁸²⁸ With that said, voluntary compliance measures complement traditional command-and-control measures.⁸²⁹ “They cannot, and should not, replace” the traditional measures.⁸³⁰

The most notable voluntary compliance measures are self-regulation and co-regulation.⁸³¹ The use of these measures has been endorsed by researchers and policy-makers alike.⁸³² However, concerns have been raised about their efficacy as a tool for environmental enforcement to the extent that they may divert some resources from, and thereby detract from the gains achieved by, traditional enforcement.⁸³³ The lack of compliance monitoring also raises questions on the merit of voluntary compliance measures with the result that environmental authorities revert to traditional command-and-control measures.⁸³⁴ The discussion below explores the use of various self-regulatory and co-regulatory measures as well as the arguments made for and against them.

3.1.1 Self-regulatory Measures

Self-regulatory measures are self-imposed practices that are formulated and implemented by industry without state intervention.⁸³⁵ Corporations adopt these measures to gain a competitive advantage and to be viewed positively in the market place.⁸³⁶ In response to these pressures, corporations opt to regulate themselves by formulating standards and codes of practice,

⁸²⁷ Lehmann ‘Voluntary Compliance Measures’ in *Environmental Compliance and Enforcement in South Africa* 269.

⁸²⁸ J Hanks ‘Achieving Industrial Sustainable Development in South Africa: What Role for ‘Self-regulatory’ and Co-regulatory Instruments’ (1998) 5 *SAJELP* 317.

⁸²⁹ Craigie, Snijman & Fourie ‘Dissecting Environmental Compliance and Enforcement’ in *Environmental Compliance and Enforcement in South Africa* 60.

⁸³⁰ Lehmann ‘Voluntary Compliance Measures’ in *Environmental Compliance and Enforcement in South Africa* 269; Kidd (2002) *SAJELP* 26.

⁸³¹ Hanks (1998) *SAJELP* 317.

⁸³² C Coglianese & J Nash ‘Performance Track’s Postmortem: Lessons from the Rise and Fall of EPA’s Flagship Voluntary Program’ (2014) 38 *Harvard Environmental Law Review* 12; E Biber ‘Do Voluntary Compliance Programs Improve Environmental Law?’ 2015 *Journal of the Things we Like* 435.

⁸³³ Coglianese & Nash (2014) *Harvard Environmental Law Review* 34.

⁸³⁴ A Ogus ‘Rethinking Self-regulation’ (1995) 15 *Oxford Journal of Legal Studies* 99; Craigie, Snijman & Fourie ‘Dissecting Environmental Compliance and Enforcement’ in *Environmental Compliance and Enforcement in South Africa* 60.

⁸³⁵ I Ayres & J Braithwaite *Responsive Regulation: Transcending the Deregulation Debate* (1992) 103; Ogus (1995) *Oxford Journal of Legal Studies* 98.

⁸³⁶ Hanks (1998) *SAJELP* 318.

establishing monitoring programs and setting pollution reduction targets to limit their impact on the environment.⁸³⁷

Proponents of self-regulation do not propose that it replace command-and-control measures.⁸³⁸ These measures are meant to supplement traditional enforcement.⁸³⁹ Ideally, self-regulatory measures should govern behaviour where traditional measures fail to do so.⁸⁴⁰ Therefore, self-regulation requires that corporations *choose* to go beyond the minimum standards that are required by law.⁸⁴¹ It does not suffice for corporations to declare that they are committed to limiting environmental harm, they must actually take measures to improve environmental protection.⁸⁴² Among the self-regulatory measures that are taken by corporations are firm-specific measures, industry-specific measures and non-industry-specific measures.⁸⁴³ These measures are discussed below.

The most notable firm-specific measure is the environmental management system (EMS).⁸⁴⁴ Corporations in South Africa are increasingly adopting EMSs voluntarily or as part of an undertaking in an industry-wide code of practice.⁸⁴⁵ More generally, management systems are used to facilitate the day-to-day activities of a business.⁸⁴⁶ The environmental component of a management system enables a corporation to assess and monitor the environmental impacts of its business.⁸⁴⁷ It also identifies the measures that can be used to reduce the corporation's environmental impact, such as reducing carbon emissions and pollution as well as adopting

⁸³⁷ Lehmann 'Voluntary Compliance Measures' in *Environmental Compliance and Enforcement in South Africa* 275.

⁸³⁸ N Gunningham 'Enforcing Environmental Regulation' (2011) 23 *Journal of Environmental Law* 176; Nel & Wessels (2010) *PELR* 54.

⁸³⁹ Kidd (2002) *SAJELP* 26.

⁸⁴⁰ Lehmann 'Voluntary Compliance Measures' in *Environmental Compliance and Enforcement in South Africa* 275; Kidd (2002) *SAJELP* 26.

⁸⁴¹ Hanks (1998) *SAJELP* 318; Italicised for emphasis.

⁸⁴² Hanks (1998) *SAJELP* 319.

⁸⁴³ Lehmann 'Voluntary Compliance Measures' in *Environmental Compliance and Enforcement in South Africa* 276; 'Firm' refers to a corporation, such as a mining company.

⁸⁴⁴ Kidd (2002) *SAJELP* 30.

⁸⁴⁵ M Kidd 'Environmental Audits and Self-incrimination' (2004) 37 *Comparative and International Law Journal of Southern Africa* 90; Enviropaedia 'Environmental Management Systems' available at http://www.enviropaedia.com/topic/default.php?topic_id=98 accessed on 20 June 2019.

⁸⁴⁶ Lehmann 'Voluntary Compliance Measures' in *Environmental Compliance and Enforcement in South Africa* 276.

⁸⁴⁷ BC Lesinski 'Environmental Management System' (2002) 20 *Preventive Law Reporter* 3; SL Carelse *A System for Integrated Environmental Management in Local Authorities to Inform Departmental Decision-making: The Case of Hessequa Municipality* (unpublished Masters in Public Administration, Stellenbosch University, 2016) 32.

sustainable practices.⁸⁴⁸ In essence, an EMS contains a corporation's commitment to environmental protection and how that is to be fulfilled.⁸⁴⁹

EMSs are gaining traction in South Africa and corporations are adopting them due to pressure from consumers and shareholders.⁸⁵⁰ Furthermore, EMSs are increasingly being made a precondition for membership in certain industry associations and certification schemes.⁸⁵¹ Reporting and auditing of environmental commitments and progress are important elements of an EMS.⁸⁵² Corporations in energy-intensive industries account for the most environmental reporting because their environmental impacts are either greater or more noticeable than those in other industries.⁸⁵³

Industry-specific codes of environmental practice are the most commonly used for self-regulation.⁸⁵⁴ Their use is motivated by the fact that the reputation of an entire industry may be tainted by the activities of one company in the industry.⁸⁵⁵ This is the case for industries in which consumers cannot easily distinguish the products of specific companies and the environmental impact of their activities, such as in the mining industry.⁸⁵⁶ The South African Mineral Reporting Codes are an example of industry-specific codes.⁸⁵⁷

In addition to the two aforementioned categories of self-regulation, there are non-industry-specific measures.⁸⁵⁸ These measures are adopted voluntarily and encourage the improvement of environmental practices.⁸⁵⁹ The International Organisation for Standardisation (ISO) has developed one such measure, which is operated together with the South African Bureau of

⁸⁴⁸ Lesinski (2002) *Preventive Law Reporter* 3.

⁸⁴⁹ Lesinski (2002) *Preventive Law Reporter* 3.

⁸⁵⁰ M Kidd (2004) *Comparative and International Law Journal of Southern Africa* 90.

⁸⁵¹ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 328.

⁸⁵² Lehmann 'Voluntary Compliance Measures' in *Environmental Compliance and Enforcement in South Africa* 277; For example, the Johannesburg Stock Exchange has formulated its own reporting standard called the FTSE/JSE Responsible Investment Index Series to promote corporate sustainability practices on environmental, social and governance matters. As of June 2018, 76 companies had been rated on the index. (available at https://www.jse.co.za/content/JSEIndexReviewItems/2018%20ESG%20Model%20Enhancements/ESG%20model%20update_roadshow%20presentation_Sept%202018.pdf.pdf accessed on 20 June 2019).

⁸⁵³ CJ de Villiers & DS Lubbe 'Industry Differences in respect of Corporate Environmental Reporting in South Africa: A Research Note' (2001) 9 *Meditari Accountancy Research* 81.

⁸⁵⁴ Lehmann 'Voluntary Compliance Measures' in *Environmental Compliance and Enforcement in South Africa* 277.

⁸⁵⁵ MJ Lenox & J Nash 'Industry Self-regulation and Adverse Selection: A Comparison Across Four Trade Association Programs' (2003) 12 *Business Strategy and the Environment* 344.

⁸⁵⁶ Lehmann 'Voluntary Compliance Measures' in *Environmental Compliance and Enforcement in South Africa* 278.

⁸⁵⁷ SAMCODES Standards Committee 'About SAMCODES' available at <https://www.samcode.co.za/samcode-ssc/about-samcodes> accessed on 20 June 2019.

⁸⁵⁸ Lehmann 'Voluntary Compliance Measures' in *Environmental Compliance and Enforcement in South Africa* 280.

⁸⁵⁹ Kidd (2002) *SAJELP* 30.

Standards (SABS).⁸⁶⁰ The ISO 14001 is a general standard that may be adopted by all corporations in all industries for improved environmental performance.⁸⁶¹ To receive ISO 14001 certification, a company must adopt an EMS that conforms to the ISO guidelines.⁸⁶² The EMS must state the company's current environmental impacts and how it intends on reducing the impact.⁸⁶³ Companies in South Africa are increasingly committing to reduce environmental impacts through ISO 14001 certification.⁸⁶⁴ However, the positive impact of ISO certification on the environment remains limited in that the certification is largely based on reporting by companies as opposed to audits by third parties.⁸⁶⁵ In this regard, the government has a potential role to play in encouraging the adoption of auditable EMSs to improve environmental performance with reduced government inspections.⁸⁶⁶

3.1.2 Co-regulatory Measures

Co-regulatory measures operate when the “interactive relationship between the government and industry is particularly close.”⁸⁶⁷ Generally, the environmental standards are determined by the government and the means to complying with the standards are set by the regulated industry.⁸⁶⁸ Co-regulation is considered to be a satisfactory compromise between traditional regulation and self-regulation.⁸⁶⁹ In essence, it appreciates the shortfalls and benefits of both self-regulation and traditional command-and-control measures in environmental enforcement.⁸⁷⁰ In contrast to self-regulation, which has no state involvement, co-regulation involves enforcement authorities soliciting compliance with the rules set.⁸⁷¹ Unlike formal

⁸⁶⁰ DAJ Taylor ‘Is ISO 14001 Standardization in Tune with Sustainable Development? Symphony or Cacophony?’ (1998) 13 *Journal of Environmental Law and Litigation* 526; International Organisation for Standardisation ‘ISO 14000 Family – Environmental Management’ available at <https://www.iso.org/iso-14001-environmental-management.html> accessed 10 June 2019; South African Bureau of Standards ‘Environmental Management Services’ available at https://www.sabs.co.za/Sectors-and-Services/Services/EMS/ems_seriesofstandards.asp accessed 10 June 2019.

⁸⁶¹ Taylor (1998) *Journal of Environmental Law and Litigation* 518.

⁸⁶² L Pinckard ‘ISO 14000 – Trade and Environment’ (1996) 8 *Colorado Journal of International Environmental Law and Policy* 40.

⁸⁶³ C Mikulich ‘ISO 14000 – 14001, The Developing World’s Perspective’ (2003) 17 *Tulane Environmental Law Journal* 134; Taylor (1998) *Journal of Environmental Law and Litigation* 519.

⁸⁶⁴ Hanks (1998) *SAJELP* 321; Lehmann ‘Voluntary Compliance Measures’ in *Environmental Compliance and Enforcement in South Africa* 281.

⁸⁶⁵ Taylor (1998) *Journal of Environmental Law and Litigation* 524.

⁸⁶⁶ Hanks (1998) *SAJELP* 321.

⁸⁶⁷ L Csink & A Mayer ‘How to Regulate? The Role of Self-regulation and Co-regulation’ 2014 *Hungarian Yearbook of International Law and European Law* 405.

⁸⁶⁸ Kidd (2002) *SAJELP* 29.

⁸⁶⁹ Csink & Mayer 2014 *Hungarian Yearbook of International Law and European Law* 406.

⁸⁷⁰ Hanks (1998) *SAJELP* 323.

⁸⁷¹ Csink & Mayer 2014 *Hungarian Yearbook of International Law and European Law* 405.

regulation, co-regulation allows industries to determine the most cost-effective way of complying with legal environmental standards.⁸⁷²

Although co-regulatory measures take different forms, the most commonly used is the negotiated agreement.⁸⁷³ The most notable negotiated agreement in the One Environmental System lies in section 35 of NEMA.⁸⁷⁴ This section provides for environmental management cooperation agreements (EMCA) between government, industry and other interested parties.⁸⁷⁵ The purpose of this measure is to promote cooperative environmental governance through intragovernmental cooperation and public participation.⁸⁷⁶ Although the contents of an EMCA are determined by the parties to the agreement, NEMA sets out a few guidelines that may be adopted.⁸⁷⁷ NEMA provides that an EMCA may be adopted to improve the legal standards that exist for environmental protection.⁸⁷⁸ In addition, the EMCA may set compliance targets, incentives and even penalties for non-compliance.⁸⁷⁹

In theory, the NEMA EMCA has the potential to promote effective environmental compliance and enforcement.⁸⁸⁰ The use of the technical knowledge and resources of industry in partnership with environmental authorities could ensure that environmental issues are resolved in a pragmatic way.⁸⁸¹ EMCAs are also capable of achieving their primary objective of cooperative environmental governance.⁸⁸² In practice however, there is little optimism about the effectiveness of EMCAs to fulfil its intended purpose.⁸⁸³ The provisions of section 35 have been criticised for being convoluted and placing onerous obligations on the parties to such agreements.⁸⁸⁴ The cumbersome obligations in section 35 have led to a situation where such

⁸⁷² Hanks (1998) *SAJELP* 323.

⁸⁷³ Lehmann 'Voluntary Compliance Measures' in *Environmental Compliance and Enforcement in South Africa* 283.

⁸⁷⁴ Kidd (2002) *SAJELP* 30; for a detailed discussion of environmental management cooperation agreements see W Scholtz 'Co-operative and Participatory Governance via the Implementation of Environmental Management Co-Operation Agreements' (2004) 11 *SAJELP*; GV Seekoe *The Environmental Management Cooperation Agreement as a Co-Operative Environmental Governance Tool in a Segmented Environmental Administration* (unpublished LLM Thesis, North West University, 2017).

⁸⁷⁵ Section 35(1) NEMA.

⁸⁷⁶ Section 35(1) NEMA read with section 2(b) NEMA and the long title of NEMA. The concept of cooperative environmental governance is explored more extensively in Chapter 5 of this dissertation.

⁸⁷⁷ Section 35(1) NEMA.

⁸⁷⁸ Section 35(3)(a) NEMA.

⁸⁷⁹ Section 35(3)(d) NEMA.

⁸⁸⁰ Scholtz (2004) *SAJELP* 184.

⁸⁸¹ Scholtz (2004) *SAJELP* 194.

⁸⁸² Seekoe *The Environmental Management Cooperation Agreement* 36.

⁸⁸³ Seekoe *The Environmental Management Cooperation Agreement* 63; Scholtz (2004) *SAJELP* 192.

⁸⁸⁴ Scholtz (2004) *SAJELP* 192; Seekoe *The Environmental Management Cooperation Agreement* 37 for a critique of section 35.

negotiated agreements are rarely concluded in South Africa.⁸⁸⁵ A revision of section 35 would better achieve the desired outcome of co-operative environmental governance.⁸⁸⁶

3.2 Incentive-based Measures

Incentive-based measures are based on the principle that it is more effective and efficient to encourage and reward compliance than to sanction non-compliance.⁸⁸⁷ These measures are either positive or negative in nature.⁸⁸⁸ Positive measures reward the conduct of those that minimise their impact on the environment by taking measures to protect the environment.⁸⁸⁹ Conversely, negative measures are disincentives that prescribe costs to discourage conduct that is harmful to the environment.⁸⁹⁰ The range of available incentive-based measures includes market-based incentives, regulatory incentives and information-based incentives.⁸⁹¹ The latter two incentives are seldom used in South Africa; thus, their discussion below is limited.⁸⁹²

3.2.1 Market-based Incentives

In the context of environmental law, market-based incentives are used to drive changes in the behaviour of market players (industries, consumers and investors) whose activities may cause harm to the environment.⁸⁹³ The underlying philosophy of these incentives is that ordinary markets generally value goods and services accurately.⁸⁹⁴ A market failure, therefore, occurs when the price of products does not accurately reflect the cost of production because certain externalities are not included in the costs.⁸⁹⁵ Externalities include all forms of pollution that arise from the production and consumption of products.⁸⁹⁶ A market failure warrants state intervention to influence industries to use natural resources more efficiently and to reduce the impact of externalities.⁸⁹⁷ To cure market failures, the government uses market-based

⁸⁸⁵ Seekoe *The Environmental Management Cooperation Agreement* 60.

⁸⁸⁶ Scholtz (2004) *SAJELP* 194; Seekoe *The Environmental Management Cooperation Agreement* recommend the form of revision that section 35 should take.

⁸⁸⁷ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 58.

⁸⁸⁸ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 58.

⁸⁸⁹ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 300.

⁸⁹⁰ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 300.

⁸⁹¹ Abbot *Enforcing Pollution Control Regulation* 4.

⁸⁹² Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 58.

⁸⁹³ PGW Henderson 'Fiscal Incentives for Environmental Protection – Introduction' (1994) 1 *SAJELP* 49.

⁸⁹⁴ TC Schelling *Incentives for Environmental Protection* (1983) 1.

⁸⁹⁵ PGW Henderson 'Fiscal Incentives for Environmental Protection – Conceptual Framework' (1995) 1 *SAJELP* 56; Schelling *Incentives for Environmental Protection* 14; Henderson (1994) *SAJELP* 50.

⁸⁹⁶ Schelling *Incentives for Environmental Protection* 15.

⁸⁹⁷ National Treasury 'Draft Policy Paper: A Framework for Considering Market-based Instruments to Support Environmental Fiscal Reform in South Africa' (2006) 41; Henderson (1995) 1 *SAJELP* 57.

incentives, also known as economic measures, to manipulate the cost of production to include externalities.⁸⁹⁸

The aim of market-based incentives is to influence industries to internalise the environmental costs that are usually not considered in an ordinary market.⁸⁹⁹ In addition, they seek to promote the efficient use and management of natural resources and to raise revenue for the country to fund environmental protection.⁹⁰⁰ There are positive market-based incentives that reward efficient and sustainable activities and those that are negative in nature in that they discourage inefficient and unsustainable activities.⁹⁰¹

The use of market-based incentives in South Africa has grown steadily over the past three decades.⁹⁰² Varying market-based incentives have been developed, however, the discussion below is limited to the carbon tax as it is one of the only economic measures with explicit environmental objectives.⁹⁰³ Many economic measures are primarily intended to increase revenue, with environmental protection as only an incidental outcome.⁹⁰⁴ Although introduced in June 2019, much debate already surrounds the carbon tax as an effective environmental enforcement measure.⁹⁰⁵

Market-based incentives have been expanded through the Carbon Tax Act to reduce greenhouse gas emissions that contribute to the earth's climate change.⁹⁰⁶ The Act aims to reduce emissions in a sustainable and affordable manner by imposing a carbon tax on certain industries such as mining and energy (especially, electricity generation).⁹⁰⁷ The carbon tax applies to all emissions produced by taxpayers via industrial processes and the burning of fossil fuels.⁹⁰⁸

⁸⁹⁸ Henderson (1994) *SAJELP* 51.

⁸⁹⁹ Henderson (1994) *SAJELP* 51.

⁹⁰⁰ PGW Henderson 'Fiscal Incentives for Environmental Protection – The Way Forward' (1995) 2 *SAJELP* 151.

⁹⁰¹ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 300.

⁹⁰² Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 299.

⁹⁰³ A Nahman, L Godfrey & R Wise 'Market-based Incentives in South Africa' (2008) 108 *WIT Transactions on Ecology and the Environment* 140; Henderson (1995) 2 *SAJELP* 151.

⁹⁰⁴ National Treasury 'Draft Policy Paper: A Framework for Considering Market-based Instruments to Support Environmental Fiscal Reform in South Africa' (2006) 70 sets out various economic measures and their objectives.

⁹⁰⁵ R De Jager 'The Potential Implications of Introducing a Carbon Tax in South Africa' (2018) 4 *Journal of Corporate and Commercial Law & Practice* 88; T Toriola 'A Blind Commitment or Strategic Approach' (2015) 15 *Without Prejudice* 66; E Stoddard 'South Africa's Carbon Tax Raises Questions and Hot Air' *Daily Maverick* 3 June 2019, available at <https://www.dailymaverick.co.za/article/2019-06-03-south-africas-carbon-tax-raises-questions-and-hot-air/>, accessed on 06 June 2019.

⁹⁰⁶ Preamble of the Carbon Tax Act 15 of 2019.

⁹⁰⁷ Section 3 read with Schedule 2 of the Carbon Tax Act 15 of 2019.

⁹⁰⁸ Section 4 of the Carbon Tax Act 15 of 2019.

The taxpayer is liable for monitoring and reporting its emissions activities, which are verified by the DEFF.⁹⁰⁹ Once the emissions have been recorded and verified, the taxpayer is responsible for calculating and paying the carbon tax to the South African Revenue Service.⁹¹⁰ Essentially, the administration of the carbon tax requires an alignment of implementation processes of the DEFF and the South African Revenue Service. Provision for this arrangement has been set up to ensure the effective implementation of the Carbon Tax Act.⁹¹¹

The carbon tax is based on the polluter-pays principle, which encourages industries to internalise the environmental costs of production and for investors and consumers to consider the externalities of industries with which they engage.⁹¹² The carbon tax is a negative economic measure in that it discourages the emission of greenhouse gases by imposing a tax.⁹¹³ The Carbon Tax Act also provides for positive economic measures in the form of several tax-free emission allowances.⁹¹⁴ Allowances are designed to reduce the taxpayer's liability for the carbon tax.⁹¹⁵ One such allowance is the carbon budget, which reduces tax liability when an emitter's total emissions are below a stipulated limit (the budget).⁹¹⁶ The carbon offset allowance provides flexibility in that it allows an emitter to choose between reducing its own emissions or funding a carbon offset project to reduce the country's overall emissions.⁹¹⁷ An emitter's carbon tax liability may only be reduced through allowances by a total of 95 percent.⁹¹⁸

Despite its good intentions, the carbon tax has not been well received.⁹¹⁹ It is projected that the carbon tax will negatively impact the economy by causing a decrease in South Africa's growth domestic product (GDP).⁹²⁰ South Africa, as a developing country, cannot afford even the

⁹⁰⁹ Regulation 7 – 11 of GN 275 in *Government Gazette* 40762 of April 2017.

⁹¹⁰ Section 54AA of the Customs and Excise Act 91 of 1964; Section 1 of the Customs and Excise Amendment Act 13 of 2019;

⁹¹¹ National Treasury 'Explanatory Memorandum for the Carbon Tax Bill' (2018) available at http://www.treasury.gov.za/comm_media/press/2018/2018112101%20Explanatory%20Memorandum%20to%20the%202018%20Carbon%20Tax%20Bill%20-%202020%20Nov%202018.pdf, accessed 03 June 2019.

⁹¹² Henderson (1995) 1 *SAJELP* 60.

⁹¹³ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 302.

⁹¹⁴ Chapter II of the Carbon Tax Act 15 of 2019.

⁹¹⁵ Section 1 of the Carbon Tax Act 15 of 2019.

⁹¹⁶ Section 12 of the Carbon Tax Act 15 of 2019.

⁹¹⁷ Section 13 of the Carbon Tax Act 15 of 2019.

⁹¹⁸ Section 14 of the Carbon Tax Act 15 of 2019.

⁹¹⁹ De Jager (2018) *Journal of Corporate and Commercial Law & Practice* 116; Stoddard 'South Africa's Carbon Tax Raises Questions and Hot Air' *Daily Maverick* 3 June 2019.

⁹²⁰ B Merven, A Moyo, A Stone et al 'Socio-economic Implications of Mitigation in the Power Sector Including Carbon taxes in South Africa' (2014) Working paper for CDKN Project on Linking Sectoral and economy-wide models by the Energy Research Centre at the University of Cape Town available at <https://open.uct.ac.za/handle/11427/16897> accessed 03 June 2019; T Callen 'Gross Domestic Product: An Economy's All' *International Monetary Fund* 18 December 2018, available at

slightest drop in GDP as a result of the carbon tax.⁹²¹ A World Bank report, which reviews the impact of carbon taxes in various jurisdictions over three decades, cautions the use of carbon taxes as they have been reported to cause overall economic loss.⁹²² Of all the industries responsible for emissions in South Africa, the mining and metals industries are likely to be the most negatively affected due to an increase in electricity prices.⁹²³ Therefore, the Minerals Council, which represents the mining industry, expressed its disapproval of the tax as it will increase the costs of doing business, thus undermining employment levels and possible job creation.⁹²⁴

Regarding its environmental impact, critics argue that the carbon tax is an inefficient tool for reducing greenhouse gas emissions.⁹²⁵ Studies show that the carbon tax is unlikely to motivate industries that are high emitters to reduce their emissions.⁹²⁶ The energy industry, for instance, accounts for 60 percent of the country's total emissions.⁹²⁷ The low rates of the carbon tax are said to be insufficient to incentivise the energy industry to switch to less carbon-intensive means of generating electricity.⁹²⁸ It will be more cost effective for the energy industry to continue generating electricity and paying the tax than to take measures to reduce emissions.⁹²⁹ Ultimately, the carbon tax is expected not to achieve its primary goal of reducing emissions.⁹³⁰

Although proponents of the carbon tax argue that the tax does not sufficiently motivate environmental protection, they acknowledge it as a stepping stone to reducing greenhouse gas

<https://www.imf.org/external/pubs/ft/fandd/basics/gdp.htm>, accessed 04 June 2019 defines Gross Domestic Product (GDP) as a country's overall economic activity. It refers to the monetary value of all goods and services consumed in a country over a certain period.

⁹²¹ I Laprecht 'Study Suggests Carbon Tax will have Modest Growth Impact' *Moneyweb* 11 November 2016 available at <https://www.moneyweb.co.za/mymoney/moneyweb-tax/study-suggests-carbon-tax-will-have-modest-growth-impact/> accessed 03 June 2019.

⁹²² GR Timilsinis 'Where is the Carbon Tax after Thirty Years of Research?' (2018) World Bank Policy Research Working Paper 8493 at 26 available at <http://documents.worldbank.org/curated/en/209041530236682559/Where-is-the-carbon-tax-after-thirty-years-of-research> accessed 03 June 2019.

⁹²³ De Jager (2018) *Journal of Corporate and Commercial Law & Practice* 101.

⁹²⁴ Stoddard 'South Africa's Carbon Tax Raises Questions and Hot Air' *Daily Maverick* 3 June 2019.

⁹²⁵ De Jager (2018) *Journal of Corporate and Commercial Law & Practice* 104; Stoddard 'South Africa's Carbon Tax Raises Questions and Hot Air' *Daily Maverick* 3 June 2019.

⁹²⁶ L Baker, J Burton, C Godhino et al 'The Political Economy of Decarbonisation: Exploring the Dynamics of South Africa's Electricity Sector' (2015) Research Report by the Energy Research Centre at the University of Cape Town 48 available at http://www.erc.uct.ac.za/sites/default/files/image_tool/images/119/Papers-2015/15-Baker-et-al-Political_economy_decarbonisation.pdf accessed 03 June 2019.

⁹²⁷ United States Agency for International Development (USAID) 'Greenhouse Gas Emissions in South Africa' 1 available at <https://www.climatelinks.org/resources/greenhouse-gas-emissions-factsheet-south-africa>, accessed 03 June 2019.

⁹²⁸ De Jager (2018) *Journal of Corporate and Commercial Law & Practice* 106.

⁹²⁹ Department of Energy 'Integrated Resource Plan for Electricity 2010 – 2030 Update Report' 21 available at http://www.energy.gov.za/IRP/irp%20files/IRP2010_2030_Final_Report_20110325.pdf, accessed 03 June 2019.

⁹³⁰ Timilsinis 'Where is the Carbon Tax after Thirty Years of Research?' (2018) World Bank Policy Research Working Paper 8493 at 57.

emissions.⁹³¹ Researchers at the University of Cape Town propose that the tax revenue generated from the carbon tax be used to advance socio-economic causes such as education, housing and the installation of solar energy on government-funded housing.⁹³² These approaches have been adopted in Switzerland and Chile.⁹³³

Given that the carbon tax has been criticised as an ineffective and unnecessary measure to mitigate climate change and improve the economy, alternative measures should be considered.⁹³⁴ One such alternative is the Renewable Energy Independent Power Producer's Procurement Programme (the REIPPPP).⁹³⁵ Through the REIPPPP, the country intends on increasing electricity generation through renewable energy.⁹³⁶ The program has been hailed as a success thus far and has been lauded for significantly reducing emission to a much greater extent than the carbon tax would and for increasing investments into the country.⁹³⁷ Instead of implementing the carbon tax, it seems more plausible for the government to promote the REIPPPP.⁹³⁸

The ultimate impact of implementing the carbon tax remains uncertain.⁹³⁹ Therefore, the Treasury has committed to reviewing the advantages and disadvantages of the tax after three years to determine whether the tax achieves its primary aim of reducing greenhouse gas emissions.⁹⁴⁰ To ensure that compliance with the Carbon Tax Act is achieved, the relevant authorities must ensure its effective implementation and enforcement.

3.2.2 Regulatory Incentives

Regulatory incentives encourage industries and consumers to do more than the law requires.⁹⁴¹ Industries that display high levels of environmental protection are rewarded with a reduction

⁹³¹ The World Wide Fund for Nature (WWF) 'The Carbon Tax 2019 Explained' available at https://www.wwf.org.za/our_news/news/?28421/The-Carbon-Tax-2019-explained accessed 03 June 2019.

⁹³² H Winkler 'Reducing Energy Poverty through Carbon Tax Revenues in South Africa' (2017) 28 *Journal of Energy in Southern Africa* 17.

⁹³³ GR Timilsinin 'Where is the Carbon Tax after Thirty Years of Research?' (2018) World Bank Policy Research Working Paper 8493 at 51.

⁹³⁴ De Jager (2018) *Journal of Corporate and Commercial Law & Practice* 116.

⁹³⁵ Baker, Burton, Godhino et al 'The Political Economy of Decarbonisation: Exploring the Dynamics of South Africa's Electricity Sector' (2015) Research Report by the Energy Research Centre at the University of Cape Town 9.

⁹³⁶ Baker, Burton, Godhino et al 'The Political Economy of Decarbonisation: Exploring the Dynamics of South Africa's Electricity Sector' (2015) Research Report by the Energy Research Centre at the University of Cape Town 9.

⁹³⁷ De Jager (2018) *Journal of Corporate and Commercial Law & Practice* 112.

⁹³⁸ De Jager (2018) *Journal of Corporate and Commercial Law & Practice* 116.

⁹³⁹ Stoddard 'South Africa's Carbon Tax Raises Questions and Hot Air' *Daily Maverick* 3 June 2019.

⁹⁴⁰ National Treasury 'Media Statement – Publication of the 2019 Carbon Tax Act' available at <https://www.gov.za/speeches/publication-2019-carbon-tax-act-26-may-2019-0000> accessed 06 June 2019.

⁹⁴¹ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 304.

in regulatory responsibilities.⁹⁴² The underlying premise of regulatory incentives is that incentivising voluntary environmental compliance may reduce the administrative compliance and enforcement burdens and costs for both enforcement authorities and those subject to regulation.⁹⁴³ Regulatory incentives are likened to self-regulation and include reduced reporting requirements, fewer inspections and expedited authorisation procedures.⁹⁴⁴

South Africa currently has no regulatory incentives in use.⁹⁴⁵ The absence of these measures lends itself to several reasons, which include the over-reliance on formal regulation and command-and-control measures.⁹⁴⁶ Policy-makers and enforcement authorities are also quite sceptical of voluntary industry practices.⁹⁴⁷ Introduction of these measures is also likely to be a burden, although minuscule, on the resources and capacity of enforcement authorities.⁹⁴⁸

The absence of regulatory incentives is alarming, however, given the recent shift in government policies towards including alternative compliance and enforcement measures.⁹⁴⁹ Arguments in favour of regulatory incentives emphasise their potential to encourage environmental protection.⁹⁵⁰ Although tempting, the government should exercise caution when considering introducing these measures by taking into account the burden on governmental resources and whether corporations are willing to participate in the proposed incentive schemes.⁹⁵¹

3.2.3 Information-based Incentives

Information-based incentives are used to influence the behaviour of industries and “consumers through the collection and public distribution of information relating to the environmental performance of industries.”⁹⁵² These measures take different forms, which include environmental certification, performance and compliance reporting as well as eco-labelling.⁹⁵³

⁹⁴² K Wilke *What is in it for me: Exploring Natural Capital Incentives* (2005) 6.

⁹⁴³ WRQ Anton, G Deltas & M Khanna ‘Incentives for Environmental Self-regulation and implications for environmental performance’ (2003) 48 *Journal of Environmental Economics and Management* 635.

⁹⁴⁴ Anton et al (2003) *Journal of Environmental Economics and Management* 633.

⁹⁴⁵ Paterson ‘Incentive-based Measures’ in *Environmental Compliance and Enforcement in South Africa* 327.

⁹⁴⁶ W Scholtz ‘Introduction of Environmental Management Co-operation Agreements in South Africa’ (2004) 11 *SAJELP* 38.

⁹⁴⁷ Paterson ‘Incentive-based Measures’ in *Environmental Compliance and Enforcement in South Africa* 327.

⁹⁴⁸ Paterson ‘Incentive-based Measures’ in *Environmental Compliance and Enforcement in South Africa* 327.

⁹⁴⁹ Scholtz (2004) *SAJELP* 38.

⁹⁵⁰ Scholtz (2004) *SAJELP* 39.

⁹⁵¹ Paterson ‘Incentive-based Measures’ in *Environmental Compliance and Enforcement in South Africa* 327.

⁹⁵² Wilke *What is in it for me: Exploring Natural Capital Incentives* (2005) 14.

⁹⁵³ Paterson ‘Incentive-based Measures’ in *Environmental Compliance and Enforcement in South Africa* 298.

Environmental certification schemes allow industries to join schemes voluntarily in anticipation of securing a market advantage.⁹⁵⁴ There are international schemes of this nature that were developed to acknowledge and encourage environmentally sustainable investments.⁹⁵⁵ In South Africa, however, they are of very limited use.⁹⁵⁶ If their use expanded, the certification could be made a pre-requisite for procuring lucrative government tenders.⁹⁵⁷ However, due care should be taken before expanding their use as they have garnered international and domestic criticism for being an inefficient means of securing voluntary environmental compliance.⁹⁵⁸

Performance and compliance reporting is becoming more common in South Africa.⁹⁵⁹ Legislation aimed at environmental protection is increasingly making provision for such reporting as seen in the Carbon Tax Act.⁹⁶⁰ Reports are submitted to the relevant environmental authorities.⁹⁶¹ There are processes that allow the general public to access such information,⁹⁶² however express provision for the public disclosure and analysis of these reports may encourage corporations to perform and report better.⁹⁶³

Finally, the use of eco-labelling schemes in South Africa is on the increase as evident in the pollution and waste management legislation.⁹⁶⁴ This incentive encourages the production and consumption of products that display their environmental attributes.⁹⁶⁵ The display of such

⁹⁵⁴ PA Moyo 'Private Certification versus Public Certification in the International Environmental Arena: The Marine Stewardship Council and Marine Eco-label Fisheries Certification Schemes as Case Studies' (2010) 43 *Vanderbilt Journal of Transnational Law* 539.

⁹⁵⁵ International Organisation for Standardisation 'ISO 14000 Family – Environmental Management' available at <https://www.iso.org/iso-14001-environmental-management.html> accessed 10 June 2019 refers to the ISO 14001 accredited certificate for environmental performance.

⁹⁵⁶ Green Africa Directory 'Green Certifications' available at <http://www.greenafricadirectory.org/resources/green-certifications/> accessed 10 June 2019, lists a number of voluntary certification programs that are available in South Africa.

⁹⁵⁷ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 328.

⁹⁵⁸ Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 328.

⁹⁵⁹ Department of Environmental Affairs and Tourism 'Integrated Environmental Management Information Series 17 Environmental Reporting' (2005) 5 available at https://www.environment.gov.za/documents/strategies/integrated_environmentalmanagement_eim accessed 06 June 2019.

⁹⁶⁰ Regulation 7 of GN 275 in *Government Gazette* 40762 of April 2017.

⁹⁶¹ Regulation 11 of GN 275 in *Government Gazette* 40762 of April 2017 provides that reports detailing carbon emissions must be verified and validated by the Department of Environment, Forestry and Fisheries.

⁹⁶² Paterson 'Incentive-based Measures' in *Environmental Compliance and Enforcement in South Africa* 328.

⁹⁶³ R Hillary 'Environmental Auditing: Concepts, Methods and Developments' (1998) 2 *International Journal of Auditing* 75.

⁹⁶⁴ E van Zyl *The Regulation of Eco-labelling in South Africa: A Comparative Analysis* (unpublished LLM Thesis, Northwest University, 2004) 11; section 53(h) of the National Environmental Management: Air Quality Act 39 of 2004; section 18(2) & section 16(1)(r) of the National Environmental Management: Waste Act 59 of 2008.

⁹⁶⁵ C Tietjie 'Voluntary Eco-labelling programmes and Questions of State Programmes and Questions of State Responsibility in the WTO/GATT Legal System' (1995) 29 *Journal of World Trade* 123.

information on products can either encourage or discourage public support for a certain labelled product.⁹⁶⁶ Eco-labelling can be an effective enforcement tool in that it can be used to determine access into local and international markets, thus promoting sustainable production processes.⁹⁶⁷

4 Conclusion

The optimal selection and use of the measures explored are necessary to achieve the effective and efficient enforcement of the One Environmental System.⁹⁶⁸ Command-and-control measures are the most commonly used measures.⁹⁶⁹ Despite the status quo, critics argue that these measures, especially criminal sanctions, should be reserved for grave offences as enforcing them is resource and capacity intensive given that litigation is required.⁹⁷⁰ Criminal fines, for instance, are designed for serious offences, as they range between R5 million and R10 million.⁹⁷¹

Administrative measures are available for offences that are less serious than criminal offences.⁹⁷² The administrative fine, for instance, may be imposed for environmental damage up to R5 million.⁹⁷³ Administrative measures have been hailed as highly effective because, unlike criminal measures, they do not impose heavily on governmental resources in that they are implemented by authorised officials and not by courts.⁹⁷⁴ Furthermore, authorities that enforce administrative measures have the expertise to secure compliance with relevant environmental laws in a specific manner that non-specialist courts would not be equipped to.⁹⁷⁵

Despite their important role in enforcement, command-and-control measures are unable to secure compliance with laws consistently due to resource and capacity constraints.⁹⁷⁶ Resultantly, policy-makers are shifting towards alternative measures to complement command-

⁹⁶⁶ A Bradbrook 'Eco-labelling: Lessons from the Energy Sector' (1996) 18 *Adelaide Law Review* 35.

⁹⁶⁷ CC Erskine & L Collins 'Eco-labelling: Success or Failure' (1997) 17 *The Environmentalist* 126.

⁹⁶⁸ Du Plessis & Nel 'Driving Compliance to and Enforcement of South African Legislation by Means of a Hybrid of "New" Environmental Governance Instruments in L Paddock et al *Compliance and Enforcement in Environmental Law: Toward More Effective Implementation*' (2011) 263; Nel & Wessels (2010) *PELR* 54; Kidd (2002) *SAJELP* 26.

⁹⁶⁹ Kidd *Environmental Law* 268.

⁹⁷⁰ Kidd 'Criminal Measures' in *Environmental Compliance and Enforcement in South Africa* 243.

⁹⁷¹ Section 49B NEMA.

⁹⁷² Fourie (2009) *SAJELP* 117.

⁹⁷³ Section 24G(4) NEMA

⁹⁷⁴ Craigie, Snijman & Fourie 'Dissecting Environmental Compliance and Enforcement' in *Environmental Compliance and Enforcement in South Africa* 56.

⁹⁷⁵ Kidd (2002) *SAJELP* 33.

⁹⁷⁶ A Paterson & LJ Kotze 'Towards a More Effective Environmental Compliance and Enforcement Regime for South Africa' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 377; Kidd (1998) *SAJELP* 189.

and-control measures.⁹⁷⁷ These measures “cannot, and should not, replace” the traditional measures.⁹⁷⁸ There are multiple voluntary compliance measures, such as EMSs and negotiated agreements, that can be used to supplement the traditional measures.⁹⁷⁹ Their voluntary nature makes them an attractive tool for environmental enforcement because they do not impose a heavy burden on government resources.⁹⁸⁰ The expansion of these measures should, however, be done with caution because they do not always achieve their intended outcome.⁹⁸¹ The main reason for this anomaly is that voluntary measures often lack governmental oversight, transparency, legitimacy and accountability.⁹⁸² This oddity can be overcome by requiring reports and increasing the oversight of compliance with voluntary measures.⁹⁸³

Incentive-based measures have been expanded to supplement command-and-control measures, as seen with the introduction of the carbon tax.⁹⁸⁴ The purpose of the carbon tax to cure market failures and to reduce greenhouse gas emissions is commendable.⁹⁸⁵ However, the projections of its success are not promising.⁹⁸⁶ Perhaps an appropriate alternative to the carbon tax is to promote the use of renewable energy.⁹⁸⁷

The structure and enforcement of the aforementioned measures can be complex.⁹⁸⁸ Therefore, it is important that enforcement authorities consider the appropriateness of each measure in relation to the harm caused and the impact of enforcing such a measure.⁹⁸⁹ The effective enforcement of these measures will require the varying enforcement authorities to work together as mandated by the principle of cooperative environmental governance in NEMA.⁹⁹⁰ This concept is explored in the following chapter.

⁹⁷⁷ Nel & Wessels (2010) *PELR* 49.

⁹⁷⁸ Lehmann ‘Voluntary Compliance Measures’ in *Environmental Compliance and Enforcement in South Africa* 269; Kidd (2002) *SAJELP* 26.

⁹⁷⁹ Paterson & Kotze ‘Towards a More Effective Environmental Compliance and Enforcement Regime for South Africa’ in *Environmental Compliance and Enforcement in South Africa* 377.

⁹⁸⁰ Hilson *Regulating Pollution* 105.

⁹⁸¹ Ogun (1995) *Oxford Journal of Legal Studies* 99.

⁹⁸² Paterson & Kotze ‘Towards a More Effective Environmental Compliance and Enforcement Regime for South Africa’ in *Environmental Compliance and Enforcement in South Africa* 377.

⁹⁸³ Hanks (1998) *SAJELP* 321.

⁹⁸⁴ Paterson ‘Incentive-based Measures’ in *Environmental Compliance and Enforcement in South Africa* 299.

⁹⁸⁵ Henderson (1995) 1 *SAJELP* 151.

⁹⁸⁶ De Jager (2018) *Journal of Corporate and Commercial Law & Practice* 116; Stoddard ‘South Africa’s Carbon Tax Raises Questions and Hot Air’ *Daily Maverick* 3 June 2019.

⁹⁸⁷ De Jager (2018) *Journal of Corporate and Commercial Law & Practice* 116.

⁹⁸⁸ Paterson & Kotze ‘Towards a More Effective Environmental Compliance and Enforcement Regime for South Africa’ in *Environmental Compliance and Enforcement in South Africa* 377.

⁹⁸⁹ Paterson & Kotze ‘Towards a More Effective Environmental Compliance and Enforcement Regime for South Africa’ in *Environmental Compliance and Enforcement in South Africa* 377.

⁹⁹⁰ NEMA Long Title.

Chapter 5:

Recommendations:

Cooperative Environmental Governance

1 Introduction

This research finds that weak intragovernmental cooperation is a significant threat to the effective implementation, that is the regulation and enforcement, of the One Environmental System.⁹⁹¹ The effective implementation of the One Environmental System requires cooperation from the Department of Environment, Forestry and Fisheries (DEFF), Department of Mineral Resources and Energy (DMRE) and the Department of Housing, Water and Sanitation (DHWS) along with provincial and local government.⁹⁹² The Constitution provides for cooperative governance.⁹⁹³ Cooperative governance is then tailored to environmental management in NEMA's provision for cooperative environmental governance.⁹⁹⁴

The narrow scope of this research does not permit an extensive engagement with the vast literature on cooperative governance and its application to environmental matters.⁹⁹⁵ Nevertheless, this chapter identifies cooperative environmental governance as a mechanism to

⁹⁹¹ Chapter 2 of this dissertation; Portfolio Committee on Mineral Resources and Energy Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* (2019) unpublished parliamentary document presented at the Colloquium on the One Environmental System convened by the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 20 November 2018 (copy on file with author) 15.

⁹⁹² South African Human Rights Commission *National Hearings on the Underlying Socio-economic Challenges of Mining-affected Communities in South Africa* (2016) at 45 available at <https://www.sahrc.org.za/home/21/files/SAHRC%20Mining%20communities%20report%20FINAL.pdf> accessed 17 February 2018.

⁹⁹³ Chapter 3 of the Constitution of the Republic of South Africa, 1996.

⁹⁹⁴ Long title & Chapter 3 of the National Environmental Management Act 107 of 1998 (hereinafter NEMA).

⁹⁹⁵ See W Du Plessis 'Legal Mechanisms for Co-operative Governance in South Africa: Successes and Failures' (2008) 23 *SA Public Law*; LJ Kotze, JG Nel, W Du Plessis et al 'Strategies to Integrate Policy at the Operational Level: Towards an Integrated Framework for Environmental Authorisation' (2007) 14 *SAJELP*; C Bosman, L Kotze & W Du Plessis 'The Failure of the Constitution to Ensure Integrated Environmental Management from a Co-operative Governance Perspective' (2004) 19 *SA Public Law*; EJ Nealer & M Naude 'Integrated Co-operative Governance in the Context of Sustainable Development' (2011) 7 *The Journal for Transdisciplinary Research in Southern Africa*; J Nel & W Du Plessis 'Unpacking Integrated Environmental Management – A Step Closer to Effective Co-operative Governance?' (2004) 19 *SA Public Law*; T Coetzee 'Co-operative Governance and Good Governance: Reality or Myth?' (2010) 35 *Journal for Contemporary History*; LP Malan 'Co-operative Environmental Management: The Applicability of the Multi-dimensional Model' (2009) 44 *Journal of Public Administration*; L Malan 'Intergovernmental Relations and Co-operative Government in South Africa: The Ten-year Review' (2005) 24 *Politeia*.

address the challenges faced in enforcing the One Environmental System.⁹⁹⁶ For the cooperative efforts to be effective, each of the three national departments, along with their provincial and local functionaries, must perform their respective duties.⁹⁹⁷

2 Cooperative Environmental Governance

To define cooperative environmental governance, an understanding of cooperative governance is required.⁹⁹⁸ Cooperative governance is defined as the state of all spheres of government, namely national, provincial and local government, working together to ensure an effective, efficient, transparent, accountable and coherent government.⁹⁹⁹ It is an essential mechanism for dealing with intragovernmental fragmentation and is an indispensable part of South Africa's environmental regime.¹⁰⁰⁰

Cooperative governance in the context of environmental management is called cooperative environmental governance.¹⁰⁰¹ Cooperative environmental governance is defined as the integration of different spheres of government and line functionaries, such as departments, to maintain a sustainable environment.¹⁰⁰² The integration extends to industries and the public.¹⁰⁰³

The Constitution provides for cooperative environmental governance, as part of the broader cooperative governance obligation, in Chapter three.¹⁰⁰⁴ This chapter requires the national, provincial and local spheres of government to perform varying functions that are unique to each sphere.¹⁰⁰⁵ These distinct government functions should, however, be executed in accordance with the principles of cooperative governance outlined in chapter three.¹⁰⁰⁶ Intragovernmental cooperation entails exercising designated powers in a manner that does not encroach on the integrity of other spheres, not assuming any power except those designated

⁹⁹⁶ LJ Kotze 'Environmental Governance' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 121 proposes cooperative environmental governance as a solution for fragmentation within government.

⁹⁹⁷ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 13.

⁹⁹⁸ Kotze 'Environmental Governance' in *Environmental Compliance and Enforcement in South Africa* 121.

⁹⁹⁹ CL van Schalkwyk *A Legal Perspective on the Role of Municipalities in Navigating the Relationship between Land Use Planning and Mining* (unpublished PhD Thesis, University of Cape Town, 2019) 23; Coetzee (2010) *Journal for Contemporary History* 86.

¹⁰⁰⁰ Kotze 'Environmental Governance' in *Environmental Compliance and Enforcement in South Africa* 121.

¹⁰⁰¹ E Bray 'Co-operative Governance in the Context of the National Environmental Management Act 107 of 1998' (1999) 6 *SAJELP* 2; Du Plessis (2008) *SA Public Law* 108; Kotze 'Environmental Governance' in *Environmental Compliance and Enforcement in South Africa* 121.

¹⁰⁰² Bray (1999) *SAJELP* 2.

¹⁰⁰³ Kotze 'Environmental Governance' in *Environmental Compliance and Enforcement in South Africa* 121.

¹⁰⁰⁴ Chapter 3 of the Constitution of the Republic of South Africa, 1996.

¹⁰⁰⁵ Section 41(1) of the Constitution of the Republic of South Africa, 1996.

¹⁰⁰⁶ Section 41 of the Constitution of the Republic of South Africa, 1996.

and cooperating with one another in “mutual trust and good faith.”¹⁰⁰⁷ These principles advance the effective operation of cooperative environmental governance.¹⁰⁰⁸ Although each sphere and government department exists as an autonomous entity with unique mandates, they must function in a cooperative manner with one another.¹⁰⁰⁹

The remedy for intragovernmental fragmentation lies in the National Environmental Management Act (NEMA), the Act that establishes the One Environmental System for mining.¹⁰¹⁰ NEMA states its purpose immediately as being, among others, to provide for cooperative environmental governance.¹⁰¹¹ It establishes various institutions and procedures to achieve this end.¹⁰¹² These include the Committee for Environmental Coordination, environmental management and implementation plans as well as environmental management cooperation agreements.¹⁰¹³

In the context of national government cooperating with local and provincial government, the Spatial Planning and Land Use Management Act (SPLUMA) becomes relevant.¹⁰¹⁴ SPLUMA requires municipalities to cooperate with national and provincial departments that are responsible for implementing legislation that affects, among others, mining activities.¹⁰¹⁵ The purpose of such cooperation is to coordinate activities and to give effect to the respective requirements of such legislation.¹⁰¹⁶ Cooperation is also encouraged to avoid duplication of powers and functions.¹⁰¹⁷ SPLUMA provides a mechanism through which spheres of government can collaborate and issue an integrated authorisation when several laws require authorisations before an activity begins.¹⁰¹⁸ Notwithstanding these processes in SPLUMA, all land development applications must be submitted to a municipality as the “authority of first

¹⁰⁰⁷ Section 41(1) of the Constitution of the Republic of South Africa, 1996.

¹⁰⁰⁸ Kotze ‘Environmental Governance’ in *Environmental Compliance and Enforcement in South Africa* 123.

¹⁰⁰⁹ Section 41(1) of the Constitution of the Republic of South Africa, 1996.

¹⁰¹⁰ Long title & Chapter 3 NEMA; Bray (1999) *SAJELP* 2.

¹⁰¹¹ Long title NEMA.

¹⁰¹² Chapter 3 NEMA.

¹⁰¹³ Chapter 3 & Chapter 8 NEMA.

¹⁰¹⁴ Spatial Planning and Land Use Management Act 16 of 2013 (hereinafter SPLUMA).

¹⁰¹⁵ Chapter 3 SPLUMA.

¹⁰¹⁶ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 13.

¹⁰¹⁷ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 13.

¹⁰¹⁸ Chapter 3 SPLUMA.

instance.”¹⁰¹⁹ This means that municipalities must ensure that zoning requirements are met before environmental authorisations are issued by the DMRE for mining activities.¹⁰²⁰

The discussion above illustrates that cooperative environmental governance is a recognised strategy for addressing the inefficiencies caused by intragovernmental fragmentation.¹⁰²¹ However, there is little evidence to suggest that this strategy is working successfully in South Africa.¹⁰²² Like the One Environmental System, cooperative environmental governance is another sound law that lacks implementation.¹⁰²³ Nevertheless, it remains an essential tool for addressing the inefficiencies caused by intragovernmental fragmentation if properly implemented.¹⁰²⁴

3 Practical Implications of Cooperative Environmental Governance

To foster cooperative environmental governance, the DMRE, DEFF and DHWS need to start by fulfilling their respective duties efficiently.¹⁰²⁵ The DMRE needs to improve its enforcement efforts, the DEFF must ensure that the One Environmental System is properly regulated and the DHWS needs to prioritise its regulation and enforcement of the National Water Act.¹⁰²⁶ The means that each department should take to achieve effective regulation and enforcement of the One Environmental System are discussed below.

The main criticism levelled against the DEFF is the delay that it has caused in finalising the regulatory framework for the One Environmental System.¹⁰²⁷ It is therefore recommended that the DEFF prioritise the finalisation of the relevant legislation, which includes the regulations

¹⁰¹⁹ Section 33 SPLUMA; van Schalkwyk *A Legal Perspective on the Role of Municipalities in Navigating the Relationship between Land Use Planning and Mining* 190 provides clarity on this point.

¹⁰²⁰ South African Human Rights Commission *National Hearings* 2.

¹⁰²¹ Kotze ‘Environmental Governance’ in *Environmental Compliance and Enforcement in South Africa* 121.

¹⁰²² Coetzee (2010) *Journal for Contemporary History* 93.

¹⁰²³ Portfolio Committee on Mineral Resources and Energy Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 1.

¹⁰²⁴ Kotze ‘Environmental Governance’ in *Environmental Compliance and Enforcement in South Africa* 121.

¹⁰²⁵ South African Human Rights Commission *National Hearings* 45.

¹⁰²⁶ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 73 available at <https://cer.org.za/news/zero-hour>, accessed 15 March 2018; South African Human Rights Commission *National Hearings* 43.

¹⁰²⁷ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 3.

for financial provision.¹⁰²⁸ Furthermore, the DEFF must invoke its powers to deploy its environmental management inspectors when the DMRE faces capacity constraints.¹⁰²⁹

The DHWS has experienced challenges in its enforcement of the National Water Act in the context of the One Environmental System.¹⁰³⁰ Notably, contributing to the effective enforcement of the One Environmental System has been hampered by capacity constraints to issue and enforce water use licences.¹⁰³¹ This challenge may be addressed by increasing the capacity within the DHWS to manage the demands posed by the volume of mining rights and environmental authorisations issued by the DMRE.¹⁰³² Increasing the capacity within the DHWS may require an inflation in the department's budget allocation.¹⁰³³

This research reveals a wide pattern of weakness within the DMRE as the enforcement authority of the One Environmental System.¹⁰³⁴ Given that the DHWS is also tasked with enforcement, the following recommendations may also apply to it.¹⁰³⁵

Enforcement of the One Environmental System needs to be made a priority within the DMRE and DHWS.¹⁰³⁶ Effective enforcement requires more trained and appropriately qualified enforcement officials within the DMRE and DHWS that are designated with the necessary powers to fulfil this function.¹⁰³⁷ The “appropriate” qualification may differ for different functions.¹⁰³⁸ On the one hand, compliance inspections, may require technical knowledge in the fields of chemical engineering, geology, hydrology or environmental science.¹⁰³⁹ On the other hand, criminal investigations may require a background in criminal law while civil

¹⁰²⁸ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 3.

¹⁰²⁹ Section 31D(4) NEMA.

¹⁰³⁰ K Forrest & L Loate ‘Coal, Water and Mining Flowing Badly’ *Society, Work & Development Institute* June 2017 at 30 available at https://www.fes-southafrica.org/fileadmin/user_upload/coal_water_and_minig_flowng_badly.pdf, accessed 23 February 2018.

¹⁰³¹ Forrest & Loate ‘Coal, Water and Mining Flowing Badly’ *Society, Work & Development Institute* 2017 at 30.

¹⁰³² Forrest & Loate ‘Coal, Water and Mining Flowing Badly’ *Society, Work & Development Institute* 2017 at 30.

¹⁰³³ Portfolio Committee on Mineral Resources and Energy Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 8.

¹⁰³⁴ Chapter 2, part 5 of this dissertation.

¹⁰³⁵ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 73.

¹⁰³⁶ South African Human Rights Commission *National Hearings* 43.

¹⁰³⁷ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 73.

¹⁰³⁸ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 73.

¹⁰³⁹ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 73.

enforcement may require a qualification in constitutional, administrative and environmental law as well as litigation.¹⁰⁴⁰

Effective enforcement will be fostered by the management of a professional civil service with institutional memory. Essentially, the three departments responsible for the One Environmental System should develop strategies to train and retain enforcement officials, such as inspectors. Having an institutional memory implies the proper recording of all processes involved in training and retaining officials. Such strategies will ensure continuity and effective implementation that will outlive the uncertain nature of political appointments. The benefit of a civil service with institutional memory is that it promotes accountability as officials are able to learn from the successes and failures of their predecessors.

Another recommendation that promotes accountability involves creating awareness about ways to report non-compliance to enforcement officials. The public should be encouraged to report non-compliance through various channels set up by the departments. A culture of whistleblowing should be encouraged even within the governmental departments. Officials should also be encouraged to report any activities by colleagues that impede the effective implementation of the One Environmental System. The three departments may also consider a rewards system for enforcement officers who achieve predetermined performance targets.

To strengthen its enforcement efforts, the DMRE needs to foster meaningful collaboration with inspectors in the DEFF, the South African Police Services (SAPS) and the National Prosecuting Authority (NPA).¹⁰⁴¹ Historically, there has been a weak culture of cooperation between inspectors in the DMRE and those in the DEFF.¹⁰⁴² Furthermore, the practice of reporting complaints of violations to SAPS and furnishing files to the NPA for prosecution in the belief that violators will be punished has been proven to be ineffective.¹⁰⁴³ Therefore, much work needs to be done to repair these important relationships.¹⁰⁴⁴ The Interdepartmental Project

¹⁰⁴⁰ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 73.

¹⁰⁴¹ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 73.

¹⁰⁴² *Mineral Sands Resources (Pty) Ltd v Magistrate for the District of Vredendal, Kroutz NO and Others* [2017] 2 All SA 599 (WCC) para 83 – 85 (hereinafter *Mineral Sands Resources v Magistrate*).

¹⁰⁴³ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 73.

¹⁰⁴⁴ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 73.

Implementation Committee has a pivotal role to play in driving and supporting the collaborative efforts.¹⁰⁴⁵

The DMRE and DHWS need to become more acquainted with the measures available to enforce the One Environmental System.¹⁰⁴⁶ The various measures are discussed at length in chapter four of this research.¹⁰⁴⁷ Notwithstanding the availability of criminal sanctions, priority must be given to developing as well as enforcing administrative and alternative compliance measures.¹⁰⁴⁸ Internationally, there is a growing trend away from criminal measures towards administrative and alternative compliance measures.¹⁰⁴⁹ The shift owes itself to the often time-consuming and ineffective nature of criminal measures.¹⁰⁵⁰ Effective enforcement can be achieved through administrative penalties because, for instance, the monetary fine that attaches to them is effective for punishing violations and deterring future non-compliance without litigation.¹⁰⁵¹ The optimal use and selection of the available enforcement measures by the DMRE and the DHWS is imperative given that South Africa's criminal justice system is already overburdened.¹⁰⁵²

The lack of enforcement has been compounded by insufficient reporting by the DMRE on the targets and outcomes of the One Environmental System.¹⁰⁵³ It is recommended that the DMRE prioritise transparent reporting on the implementation, accomplishments and shortcomings of the One Environmental System.¹⁰⁵⁴ The DMRE must pay particular attention to producing substantially improved and formalised information on environmental issues pertaining to the mining sector through the Departmental Environmental Management Plan and its accompanying annual review.¹⁰⁵⁵ The high quality of the Mine Health and Safety Inspectorate

¹⁰⁴⁵ Department of Planning, Monitoring and Evaluation *Report on the Implementation Evaluation of the Environmental Governance in the Mining Sector* (2015) 45 available at <https://evaluations.dpme.gov.za/evaluations/510/documents/ae4636ed-1319-46e3-a03e-7536e7d9a4ec> accessed 23 March 2018.

¹⁰⁴⁶ South African Human Rights Commission *National Hearings* 43.

¹⁰⁴⁷ Chapter 4 of this dissertation.

¹⁰⁴⁸ JG Nel & JA Wessels 'How to use Voluntary, Self-regulatory and Alternative Environmental Compliance Tools: Some Lessons Learnt' (2010) 13 *PELR* 49; Chapter 4, part 3 of this dissertation.

¹⁰⁴⁹ Nel & Wessels (2010) *PELR* 49.

¹⁰⁵⁰ Nel & Wessels (2010) *PELR* 49.

¹⁰⁵¹ F Craigie, P Snijman & M Fourie 'Dissecting Environmental Compliance and Enforcement' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 56.

¹⁰⁵² M Kidd 'Alternatives to the Criminal Sanction in the Enforcement of Environmental Law' (2002) 9 *SAJELP* 26.

¹⁰⁵³ Portfolio Committee on Mineral Resources and Energy Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 1; Chapter 2, part 5 of this dissertation.

¹⁰⁵⁴ Portfolio Committee on Mineral Resources and Energy Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 6.

¹⁰⁵⁵ Section 15(5) & 16(1)(b) NEMA.

Annual Report is a significant aid for the DMRE for purposes of reporting on the One Environmental System.¹⁰⁵⁶

Monitoring and evaluation have been undermined because the databases for environmental authorisation belonging to the DMRE and DEFF have not been linked.¹⁰⁵⁷ The DEFF has argued that the DMRE has failed to share the information available on its South African Mineral Resources Administration Database (SAMRAD).¹⁰⁵⁸ The result is that the DEFF's database for environmental authorisations provides information for all sectors, except for mining, since SAMRAD is insulated in the DMRE.¹⁰⁵⁹

To address the information-sharing woes, the DMRE needs to cooperate and link its database to that of the DEFF.¹⁰⁶⁰ In addition, the three departments should develop a framework to ensure continuity given the dynamic nature of political appointments. The framework can take the form of a platform on which the departments can share information on, among others, authorisations, functions and powers of authorities and legal developments. A system of this nature will significantly improve implementation if properly developed as it has the potential to reduce duplication and conflicts between departments. The limited scope of this research does not permit a detailed recommendation on what form the shared platform should take. The departments are encouraged to develop a platform that will suit their needs and improve the implementation of the One Environmental System.

The assessment of the DMRE's performance reveals inconsistent enforcement of the regulatory framework.¹⁰⁶¹ There are a number of observations drawn from its weak performance.¹⁰⁶² Firstly, the DMRE has shown little intent to invest in the capacity that it needs to enforce the One Environmental System effectively.¹⁰⁶³ Second, the DMRE has had a weak culture of cooperation with the DEFF and DHWS.¹⁰⁶⁴ Third, the DMRE has not worked closely with

¹⁰⁵⁶ Portfolio Committee on Mineral Resources and Energy Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 11.

¹⁰⁵⁷ Parliamentary Monitoring Group 'One Environmental System Colloquium' 20 November 2018.

¹⁰⁵⁸ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 8.

¹⁰⁵⁹ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 8.

¹⁰⁶⁰ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 8.

¹⁰⁶¹ Chapter 2, part 5 of this dissertation.

¹⁰⁶² Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 71.

¹⁰⁶³ Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 71.

¹⁰⁶⁴ Forrest & Loate 'Coal, Water and Mining Flowing Badly' *Society, Work & Development Institute* 2017 at 30.

local and provincial government to prevent mining from occurring in ecologically sensitive areas.¹⁰⁶⁵ Lastly, the DMRE has not been transparent about violations of the regulatory framework.¹⁰⁶⁶ The dereliction of duty is a cause for concern and leads to the conclusion that the DMRE is not the appropriate authority for enforcing the One Environmental System.¹⁰⁶⁷

This research recommends that the DEFF, instead of the DMRE, should be the enforcement authority for the One Environmental System.¹⁰⁶⁸ The DEFF has “far more existing capacity and decades of experience enforcing environmental laws in various industries, including important parts of the mining industry until December 2014.”¹⁰⁶⁹ Tasking the DMRE with the enforcement of the One Environmental System in December 2014 resulted in the duplication of mandates, which required a significant amount of resources and capacity to ensure effective and efficient environmental management.¹⁰⁷⁰ It is not plausible for the DMRE to enforce the One Environmental System effectively while encouraging and promoting mineral extraction.¹⁰⁷¹ Instead, the DEFF should be appointed as the enforcement authority and retain authority for appeals.¹⁰⁷²

4 Conclusion

Having identified the lack of intragovernmental cooperation between the authorities responsible for the One Environmental System, this chapter proposes solutions to achieve the effective enforcement of the One Environmental System.¹⁰⁷³ The overarching proposal seeks to address the intragovernmental fragmentation by encouraging cooperative environmental governance.¹⁰⁷⁴

¹⁰⁶⁵ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System 7*.

¹⁰⁶⁶ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 71.

¹⁰⁶⁷ South African Human Rights Commission *National Hearings* 45; Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at XIII.

¹⁰⁶⁸ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 71.

¹⁰⁶⁹ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 71.

¹⁰⁷⁰ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 71.

¹⁰⁷¹ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 71.

¹⁰⁷² Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 71.

¹⁰⁷³ Chapter 5, parts 1, 2 & 3 of this dissertation.

¹⁰⁷⁴ Chapter 5, parts 2 of this dissertation.

Although cooperative environmental governance exists as a mechanism for the regulating and enforcement authorities, it has proven to be a myth in the context of the One Environmental System.¹⁰⁷⁵ All three spheres of government that are responsible for the One Environmental System are encouraged to adopt the constitutional mandate of cooperative governance.¹⁰⁷⁶ In addition, they must consult NEMA and SPLUMA for guidance on the practical implications of cooperative environmental governance in the context of the One Environmental System.¹⁰⁷⁷

Adopting the principle of cooperative environmental governance means that the three spheres of government and their line functionaries, namely the DMRE, DEFF and DHWS must fulfil their respective duties efficiently.¹⁰⁷⁸ The DMRE needs to improve its enforcement efforts, the DEFF must ensure that the One Environmental System is properly regulated and the DHWS needs to prioritise its regulation and enforcement of the National Water Act.¹⁰⁷⁹

Apart from relying on the political will of government officials to fulfil their duties, this research recommends ways in which the three departments can advance the effective implementation of the One Environmental System. Some of the notable recommendations include the departments developing a shared platform to ensure that the One Environmental System functions efficiently even after new officials have been appointed. In addition, inspectors must be managed as part of a professional civil service with an institutional memory that outlives political appointments. Furthermore, the departments are encouraged to create awareness on and promote whistleblowing by the public and government officials. Finally, the competent authorities may consider a rewards system for enforcement officials who achieve predetermined performance targets.

With specific reference to enforcement, this research reveals a wide pattern of weakness within the DMRE as the enforcement authority of the One Environmental System.¹⁰⁸⁰ The dereliction of duty is a cause for concern and leads to the conclusion that the DMRE is not the appropriate authority for enforcing the One Environmental System.¹⁰⁸¹ This research recommends that the

¹⁰⁷⁵ Coetzee (2010) *Journal for Contemporary History* 93.

¹⁰⁷⁶ South African Human Rights Commission *National Hearings* 45; Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 15.

¹⁰⁷⁷ Chapter 5, parts 2 of this dissertation.

¹⁰⁷⁸ Chapter 5, parts 3 of this dissertation.

¹⁰⁷⁹ South African Human Rights Commission *National Hearings* 43; Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 73.

¹⁰⁸⁰ Chapter 2, part 5 of this dissertation.

¹⁰⁸¹ South African Human Rights Commission *National Hearings* 45.

DEFF should be the enforcement authority for the One Environmental System.¹⁰⁸² The DEFF has “far more existing capacity and decades of experience enforcing environmental laws in various industries, including important parts of the mining industry until December 2014.”¹⁰⁸³

¹⁰⁸² Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 71.

¹⁰⁸³ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at 71.

Chapter 6:

Conclusion

1 Reflections on the One Environmental System

The research undertaken sets out the regulatory framework that governs the One Environmental System for mining.¹⁰⁸⁴ The regulatory framework was introduced to streamline the environmental regulation of mining.¹⁰⁸⁵ The most significant aspect of the regulatory framework is the allocation of powers to the competent authorities.¹⁰⁸⁶ Briefly, the Department of Mineral Resources and Energy (DMRE) is tasked with issuing mining-related environmental authorisations and enforcing environmental laws in the minerals extraction industry.¹⁰⁸⁷ The Department of Environment, Forestry and Fisheries (DEFF) sets the regulatory framework and is the appeal authority for decisions taken by the DMRE.¹⁰⁸⁸ Finally, the Department of Human Settlements, Water and Sanitation (DHWS) is responsible for regulating and enforcing the National Water Act.¹⁰⁸⁹

Although introducing the One Environmental System has improved the regulation of the environment in relation to mining, its regulation and more so enforcement have received more criticism than praise.¹⁰⁹⁰ An assessment of the One Environmental System shows that it has not achieved its intended purpose of streamlining the environmental regulation of mining.¹⁰⁹¹

¹⁰⁸⁴ Chapter 2 of this dissertation.

¹⁰⁸⁵ South African Human Rights Commission *National Hearings on the Underlying Socio-economic Challenges of Mining-affected Communities in South Africa* (2016) at 45 available at <https://www.sahrc.org.za/home/21/files/SAHRC%20Mining%20communities%20report%20FINAL.pdf> accessed 17 February 2018; Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at XIII available at <https://cer.org.za/news/zero-hour>, accessed 15 March 2018; S Gore & G Howard 'One Environmental System: reduced time frames for environmental authorisations applications' 2014 *Environmental Alert* 1.

¹⁰⁸⁶ South African Human Rights Commission *National Hearings* 44.

¹⁰⁸⁷ Section 50A(2)(b) of the National Environmental Management Act 107 of 1998 (hereinafter NEMA).

¹⁰⁸⁸ Section 50A(2)(b)-(c) NEMA.

¹⁰⁸⁹ Section 50A(2)(d) NEMA.

¹⁰⁹⁰ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* (2019) unpublished parliamentary document presented at the Colloquium on the One Environmental System convened by the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 20 November 2018 (copy on file with author) 1; Centre for Environmental Rights 'Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga' May 2016 at 19.

¹⁰⁹¹ Chapter 2, part 5 of this dissertation.

The One Environmental System is “not working” because it is not being effectively regulated and enforced.¹⁰⁹² The shortcomings identified in the DHWS relate to weak enforcement, which has been attributed to capacity constraints.¹⁰⁹³ The DEFF has hampered the effective regulation of the One Environmental System by delaying the finalisation of the regulatory framework.¹⁰⁹⁴ The DMRE has received the most criticism for dereliction of its duties as the enforcement authority.¹⁰⁹⁵

When the One Environmental System was introduced, the regulatory framework was criticised for the conflict of interest inherent in allocating the power to enforce environmental laws with the DMRE, a department mandated to promote minerals extraction.¹⁰⁹⁶ As such, the DMRE is said to be inappropriate an authority for environmental enforcement.¹⁰⁹⁷ Further criticism levelled against the DMRE relates to its inconsistent enforcement of the regulatory framework.¹⁰⁹⁸ Lastly, the DMRE has hampered a proper assessment of the One Environmental System and its enforcement efforts by failing in its legal duty to produce reports of its implementation targets and outcomes.¹⁰⁹⁹

In addition to the failure by the three competent authorities to honour their individual duties, there have been ongoing weakness in the inter-departmental relationships.¹¹⁰⁰ Cooperative governance in the environmental regulation of mining arguably has more points of weakness than strength.¹¹⁰¹ The lack of intragovernmental cooperation extends to provincial and local government.¹¹⁰²

¹⁰⁹² Chapter 2, part 5 of this dissertation.

¹⁰⁹³ K Forrest & L Loate ‘Coal, Water and Mining Flowing Badly’ *Society, Work & Development Institute* June 2017 at 11 available at https://www.fes-southafrica.org/fileadmin/user_upload/coal_water_and_minig_flowng_badly.pdf accessed 23 February 2018.

¹⁰⁹⁴ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 3.

¹⁰⁹⁵ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* (2019) unpublished parliamentary document presented to the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 19 November 2018 (copy on file with author) 4.

¹⁰⁹⁶ Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 at XIII.

¹⁰⁹⁷ South African Human Rights Commission *National Hearings* 45.

¹⁰⁹⁸ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 4.

¹⁰⁹⁹ Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* 1.

¹¹⁰⁰ Chapter 2, part 5 of this dissertation.

¹¹⁰¹ Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* 1.

¹¹⁰² Chapter 2, part 5 of this dissertation.

Although the research identifies shortfalls in both the regulation and enforcement of the One Environmental System, the focus of the research is on enforcement, rather than regulation.¹¹⁰³ The regulatory framework has areas of improvement, which are briefly addressed.¹¹⁰⁴ A lengthier discussion is dedicated to enforcement given that majority of the shortcomings of the One Environmental System have been attributed to enforcement.¹¹⁰⁵

2 Theoretical Approach to Enforcement

This research explains the One Environmental System from the theoretical perspective of the rationalist and normative theories of compliance and enforcement.¹¹⁰⁶ These theories provide a lens for understanding the basis on which regulated persons make compliance decisions.¹¹⁰⁷ Furthermore, they theorise how enforcement authorities respond to compliance behaviour.¹¹⁰⁸ Compliance and enforcement decisions do not fall squarely within one theory.¹¹⁰⁹ Both the rationalist and normative theories prevail to different degrees under different circumstances.¹¹¹⁰

Generally, compliance refers to the state of regulated persons abiding by the law and enforcement denotes the actions taken by authorities to secure compliance from regulated persons.¹¹¹¹ Both compliance and enforcement are understood differently under the rationalist theory and normative theory.¹¹¹² The rationalist theory assumes that regulated persons are likely not to comply with the law, whereas the normative theory assumes that regulated persons are law-abiding citizens.¹¹¹³ While enforcers under the rationalist theory use a coercive approach to enforcement, enforcers under the normative theory use a cooperative approach to enforcement.¹¹¹⁴ Enforcement authorities rarely rely exclusively on one approach.¹¹¹⁵ An

¹¹⁰³ Chapters 3 & 4 of this dissertation.

¹¹⁰⁴ Chapters 2 & 5 of this dissertation.

¹¹⁰⁵ Chapters 3 & 4 of this dissertation.

¹¹⁰⁶ Chapter 3 of this dissertation.

¹¹⁰⁷ Chapter 3, part 2 of this dissertation.

¹¹⁰⁸ Chapter 3, part 3 of this dissertation.

¹¹⁰⁹ RA Kagan & JT Scholz 'The "Criminology of the Corporation" and Regulatory Enforcement Strategies' in K Hawkins & JM Thomas (eds) *Enforcing Regulations* (1984) 68; K Hawkins 'Compliance Strategy, Prosecution Policy, and Aunt Sally – A Comment on Pearce and Tombs' (1990) 30 *The British Journal of Criminology* 453; D Zaelke, D Kaniaru & E Kruzikova *Making Law Work: Environmental Compliance and Sustainable Development* vol 1 (2005) 55; K Hawkin 'Enforcing Regulation More of the Same from Pearce and Tombs' (1991) 31 *The British Journal of Criminology* 428.

¹¹¹⁰ TF Malloy 'Regulation, Compliance and the Firm' (2003) 76 *Temple Law Review* 456 & 475.

¹¹¹¹ Chapter 3, part 1 of this dissertation.

¹¹¹² Chapter 3 of this dissertation.

¹¹¹³ Chapter 3, part 2 of this dissertation.

¹¹¹⁴ Chapter 3, part 3 of this dissertation.

¹¹¹⁵ RL Glicksman 'Coercive vs. Cooperative Enforcement: Effect of Enforcement Approach on Environmental Management' (2015) 42 *International Review of Law and Economics* 135.

assessment of the One Environmental System shows that enforcement authorities use a flexible, hybrid approach that relies on both coercion and cooperation.¹¹¹⁶

Because the One Environmental System may be classified as a hybrid system of enforcement, this research recommends how this system should be implemented to ensure effective enforcement.¹¹¹⁷ When enforcing compliance with laws, authorities should begin with the less intrusive cooperative approach which involves warnings and encouraging regulated persons to comply with the law.¹¹¹⁸ It is only when these fail that authorities should resort to the coercive approach which involves fines, revocation of licences and criminal prosecution.¹¹¹⁹ Shavell suggests that “the greater the harm, the higher the sanction should be.”¹¹²⁰ Maximum sanctions should be reserved for high offences because the stricter the sanction, the more costly it would be for the government to impose.¹¹²¹ Having considered the theoretical underpinnings of compliance and enforcement, this research sets out the measures that are available to enforce the One Environmental System.¹¹²²

3 Available Enforcement Measures

As stated above, theoretically, authorities use a combination of coercive and cooperative measures to enforce the One Environmental System.¹¹²³ In practice, the theory holds true.¹¹²⁴ The enforcement measures used are commonly categorised as command-and-control measures as well as alternative compliance measures.¹¹²⁵ On the one hand, command-and-control measures include criminal, administrative and civil measures.¹¹²⁶ On the other hand, alternative compliance measures include incentive-based measures and voluntary compliance measures.¹¹²⁷

¹¹¹⁶ Chapter 3, part 3 of this dissertation.

¹¹¹⁷ Chapter 3, part 3 of this dissertation.

¹¹¹⁸ J Braithwaite ‘Reward and Regulation’ (2002) 29 *Journal of Law and Society* 20.

¹¹¹⁹ Braithwaite (2002) *Journal of Law and Society* 20; see section 31N NEMA for an example.

¹¹²⁰ Braithwaite (2002) *Journal of Law and Society* 20.

¹¹²¹ Braithwaite (2002) *Journal of Law and Society* 20.

¹¹²² Chapter 4 of this dissertation.

¹¹²³ Chapter 3 of this dissertation

¹¹²⁴ M Kidd *Environmental Law* 2 ed (2011) 268; F Craigie, P Snijman & M Fourie ‘Dissecting Environmental Compliance and Enforcement’ in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 51.

¹¹²⁵ Craigie, Snijman & Fourie ‘Dissecting Environmental Compliance and Enforcement’ in *Environmental Compliance and Enforcement in South Africa* 51.

¹¹²⁶ M Kidd ‘Alternatives to the Criminal Sanction in the Enforcement of Environmental Law’ (2002) 9 *SAJELP* 26.

¹¹²⁷ Kidd (2002) *SAJELP* 26.

The effective enforcement of the One Environmental System requires the optimal selection and use of the available measures.¹¹²⁸ Command-and-control measures are the most commonly used measures.¹¹²⁹ Despite the status quo, critics argue that these measures, especially criminal sanctions, should be reserved for grave offences as enforcing them is resource and capacity intensive given that litigation is required.¹¹³⁰ Criminal fines, for instance, are designed for serious offences as they range between R5 million and R10 million.¹¹³¹

Administrative measures are available for offences that are less serious than criminal offences.¹¹³² The administrative fine, for instance, may be imposed for environmental damage up to R5 million.¹¹³³ Administrative measures have been hailed as highly effective because, unlike criminal measures, they do not impose heavily on governmental resources in that they are implemented by authorised officials and not by courts.¹¹³⁴ Furthermore, authorities that enforce administrative measures have the expertise to secure compliance with relevant environmental laws in a specific manner that non-specialist courts would not be equipped to.¹¹³⁵

Despite their important role in enforcement, command-and-control measures are unable to secure compliance with laws consistently due to resource and capacity constraints.¹¹³⁶ Resultantly, policy-makers are shifting towards alternative measures to complement command-and-control measures.¹¹³⁷ These measures “cannot, and should not, replace” the traditional measures.¹¹³⁸ There are multiple voluntary compliance measures, such as environmental management systems and negotiated agreements, that can be used to supplement the traditional

¹¹²⁸ Du Plessis & Nel ‘Driving Compliance to and Enforcement of South African Legislation by Means of a Hybrid of “New” Environmental Governance Instruments in L Paddock et al *Compliance and Enforcement in Environmental Law: Toward More Effective Implementation*’ (2011) 263; JG Nel & JA Wessels ‘How to use Voluntary, Self-regulatory and Alternative Environmental Compliance Tools: Some Lessons Learnt’ (2010) 13 *PELR* 54; Kidd (2002) *SAJELP* 26.

¹¹²⁹ Kidd *Environmental Law* 268.

¹¹³⁰ M Kidd ‘Criminal Measures’ in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 243.

¹¹³¹ Section 49B NEMA.

¹¹³² M Fourie ‘How Civil and Administrative Penalties can Change the Face of Environmental Compliance in South Africa’ (2009) 16 *SAJELP* 117.

¹¹³³ Section 24G(4) NEMA

¹¹³⁴ Craigie, Snijman & Fourie ‘Dissecting Environmental Compliance and Enforcement’ in *Environmental Compliance and Enforcement in South Africa* 56.

¹¹³⁵ Kidd (2002) *SAJELP* 33.

¹¹³⁶ Chapter 4, part 4 of this dissertation; A Paterson & LJ Kotze ‘Towards a More Effective Environmental Compliance and Enforcement Regime for South Africa’ in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 377; M Kidd ‘Environmental Crime – Time for a Rethink in South Africa?’ (1998) 5 *SAJELP* 189.

¹¹³⁷ Nel & Wessels (2010) *PELR* 49.

¹¹³⁸ K Lehmann ‘Voluntary Compliance Measures’ in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 269; Kidd (2002) *SAJELP* 26.

measures.¹¹³⁹ Their voluntary nature makes them an attractive tool for environmental enforcement because they do not impose a heavy burden on government resources.¹¹⁴⁰ The expansion of these measures should however be done with caution because they do not always achieve their intended outcome.¹¹⁴¹ The main reason for this anomaly is that voluntary measures often lack governmental oversight, transparency, legitimacy and accountability.¹¹⁴² This oddity can be overcome by requiring reports and increasing the oversight of compliance with voluntary measures.¹¹⁴³

To supplement command-and-control measures, incentive-based measures have been expanded as seen with the introduction of the carbon tax.¹¹⁴⁴ The purpose of the carbon tax to cure market failures and to reduce greenhouse gas emissions is commendable.¹¹⁴⁵ However, the projections of its success are not promising.¹¹⁴⁶ Perhaps an appropriate alternative to the carbon tax is to promote the use of renewable energy.¹¹⁴⁷

The structure and enforcement of the aforementioned measures can be complex.¹¹⁴⁸ Therefore, it is important that enforcement authorities consider the appropriateness of each measure in relation to the harm caused and the impact of enforcing such a measure.¹¹⁴⁹ The effective enforcement of these measures will require the varying enforcement authorities to work together as mandated by the principle of cooperative environmental governance in NEMA.¹¹⁵⁰ This importance of this principle for the effective enforcement of the One Environmental System concept is explored below.

¹¹³⁹ Paterson & Kotze 'Towards a More Effective Environmental Compliance and Enforcement Regime for South Africa' in *Environmental Compliance and Enforcement in South Africa* 377.

¹¹⁴⁰ C Hilson *Regulating Pollution* (2000) 105.

¹¹⁴¹ A Ogus 'Rethinking Self-regulation' (1995) 15 *Oxford Journal of Legal Studies* 99.

¹¹⁴² Paterson & Kotze 'Towards a More Effective Environmental Compliance and Enforcement Regime for South Africa' in *Environmental Compliance and Enforcement in South Africa* 377.

¹¹⁴³ J Hanks 'Achieving Industrial Sustainable Development in South Africa: What Role for 'Self-regulatory' and Co-regulatory Instruments' (1998) 5 *SAJELP* 321.

¹¹⁴⁴ Chapter 4, part 4 of this dissertation; A Paterson 'Incentive-based Measures' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 299.

¹¹⁴⁵ PGW Henderson 'Fiscal Incentives for Environmental Protection – Conceptual Framework' (1995) 1 *SAJELP* 151.

¹¹⁴⁶ R De Jager 'The Potential Implications of Introducing a Carbon Tax in South Africa' (2018) 4 *Journal of Corporate and Commercial Law & Practice* 116; E Stoddard 'South Africa's Carbon Tax Raises Questions and Hot Air' *Daily Maverick* 3 June 2019, available at <https://www.dailymaverick.co.za/article/2019-06-03-south-africas-carbon-tax-raises-questions-and-hot-air/>, accessed on 06 June 2019.

¹¹⁴⁷ De Jager (2018) *Journal of Corporate and Commercial Law & Practice* 116.

¹¹⁴⁸ Paterson & Kotze 'Towards a More Effective Environmental Compliance and Enforcement Regime for South Africa' in *Environmental Compliance and Enforcement in South Africa* 377.

¹¹⁴⁹ Paterson & Kotze 'Towards a More Effective Environmental Compliance and Enforcement Regime for South Africa' in *Environmental Compliance and Enforcement in South Africa* 377.

¹¹⁵⁰ NEMA Long Title.

4 Concluding Remarks: Cooperative Environmental Governance

This research finds that weak intragovernmental cooperation is a significant threat to the effective regulation and enforcement of the One Environmental System.¹¹⁵¹ The effective regulation and enforcement of the One Environmental System requires cooperation from the DEFF, DMRE and the DHWS along with provincial and local government.¹¹⁵² The Constitution makes provision for cooperation in the form of cooperative governance.¹¹⁵³ Cooperative governance is then tailored to environmental management in NEMA's provision for cooperative environmental governance.¹¹⁵⁴ The principle of cooperative governance is an essential mechanism for dealing with intragovernmental fragmentation and is an indispensable part of South Africa's environmental regime.¹¹⁵⁵

Cooperative governance is the state of all spheres of government, namely national provincial and local government, working together to ensure an effective, efficient, transparent, accountable and coherent government.¹¹⁵⁶ Cooperative governance in the context of environmental management is called cooperative environmental governance.¹¹⁵⁷ Cooperative environmental governance refers to the integration of different spheres of government and line functionaries, such as departments, to maintain a sustainable environment.¹¹⁵⁸

To advance the effective enforcement of the One Environmental System, this research recommends the application of the principle of cooperative environmental governance to regulation and enforcement.¹¹⁵⁹ Although cooperative environmental governance exists as a mechanism for the regulating and enforcement authorities, it has proven to be a myth in the context of the One Environmental System.¹¹⁶⁰ All three spheres of government that are responsible for the One Environmental System are encouraged to make a concerted effort to

¹¹⁵¹ Chapters 2 & 5 of this dissertation.

¹¹⁵² Chapter 5 of this dissertation.

¹¹⁵³ Chapter 3 of the Constitution of the Republic of South Africa, 1996.

¹¹⁵⁴ Long title & Chapter 3 NEMA.

¹¹⁵⁵ LJ Kotze 'Environmental Governance' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) 121.

¹¹⁵⁶ T Coetzee 'Co-operative Governance and Good Governance: Reality or Myth?' (2010) 35 *Journal for Contemporary History* 86.

¹¹⁵⁷ Chapter 5, part 2 of this dissertation; E Bray 'Co-operative Governance in the Context of the National Environmental Management Act 107 of 1998' (1999) 6 *SAJELP* 2

¹¹⁵⁸ Bray (1999) *SAJELP* 2.

¹¹⁵⁹ Chapter 5 of this dissertation.

¹¹⁶⁰ Coetzee (2010) *Journal for Contemporary History* 93.

adopt the constitutional mandate of cooperative governance.¹¹⁶¹ In addition, they must consult NEMA for guidance on the practical implications of cooperative environmental governance in the context of the One Environmental System.¹¹⁶²

Adopting the principle of cooperative environmental governance means that the three spheres of government and their line functionaries, namely the DMRE, DEFF and DHWS must fulfil their respective duties efficiently.¹¹⁶³ The DMRE needs to improve its enforcement efforts, the DEFF must ensure that the One Environmental System is properly regulated and the DHWS needs to prioritise its regulation and enforcement of the National Water Act.¹¹⁶⁴

Apart from relying on the political will of government officials to fulfil their duties, this research recommends ways in which the three departments can advance the effective implementation of the One Environmental System. Some of the notable recommendations include the departments developing a shared platform to ensure that the One Environmental System functions efficiently even after new officials have been appointed. In addition, inspectors must be managed as part of a professional civil service with an institutional memory that outlives political appointments. Furthermore, the departments are encouraged to create awareness on and promote whistleblowing by the public and government officials. Finally, the competent authorities may consider a rewards system for enforcement officials who achieve predetermined performance targets.

With specific reference to enforcement, this research reveals a wide pattern of weakness within the DMRE as the enforcement authority of the One Environmental System.¹¹⁶⁵ The dereliction of duty is a cause for concern and leads to the conclusion that the DMRE is not the appropriate authority for enforcing the One Environmental System.¹¹⁶⁶ Therefore, this research recommends that the DEFF should be the enforcement authority for the One Environmental System.¹¹⁶⁷ The DEFF has “far more existing capacity and decades of experience enforcing environmental laws in various industries, including important parts of the mining industry until December 2014.”¹¹⁶⁸

¹¹⁶¹ Chapter 5 of this dissertation.

¹¹⁶² Chapter 5 of this dissertation.

¹¹⁶³ Chapter 5 of this dissertation.

¹¹⁶⁴ Chapter 5 of this dissertation.

¹¹⁶⁵ Chapter 2, part 5 of this dissertation.

¹¹⁶⁶ Chapter 2, part 5 of this dissertation.

¹¹⁶⁷ Chapter 5 of this dissertation.

¹¹⁶⁸ Chapter 5 of this dissertation.

Bibliography

PRIMARY SOURCES

Constitution

Constitution of the Republic of South Africa, 1996.

Statutes

Adjustment of Fines Act 101 of 1991.

Carbon Tax Act 15 of 2019.

Criminal Procedure Act 51 of 1977.

Customs and Excise Act 91 of 1964.

Customs and Excise Amendment Act 13 of 2019.

Environment Conservation Act 73 of 1989.

Marine Living Resources Act 18 of 1998.

Mineral and Petroleum Resources Development Act 28 of 2002.

Mineral and Petroleum Resources Development Amendment Act 49 of 2008.

National Environmental Management Act 107 of 1998.

National Environmental Management Amendment Act 62 of 2008.

National Environmental Management Laws Amendment Act 25 of 2014.

National Environmental Management: Air Quality Act 39 of 2004.

National Environmental Management: Biodiversity Act 10 of 2004.

National Environmental Management: Waste Act 59 of 2008.

National Forests Act 30 of 1998.

National Heritage Resources Act 25 of 1999.

National Water Act 36 of 1998.

Spatial Planning and Land Use Management Act 16 of 2013.

Cases

Mineral Sands Resources (Pty) Ltd v Magistrate for the District of Vredendal, Kroutz NO and Others [2017] 2 All SA 599 (WCC).

S v Blue Platinum Ventures (Pty) Ltd 2015 JDR 1740 (GP).

S v Heuwel 2018 (2) SACR 436 (WCC).

S v Malgas 2001 (1) SACR 469 (SCA).

S v Nkomati Anthracite (Pty) Ltd unreported (Nelspruit Regional Court) case no 412/13 of 13 August 2013.

S v Vermeulen 1995 (2) SACR 439 (T).

SECONDARY SOURCES

Print Publications

Abbot C *Enforcing Pollution Control Regulation Strengthening Sanctions and Improving Deterrence* (2009) Hart Publishing, Portland.

Adreoni J 'Reasonable Doubt and the Optimal Magnitude of Fines: Should the Penalty Fit the Crime?' (1991) 22 *The Rand Journal of Economics* 385.

Anton WRQ, Deltas G & Khanna M 'Incentives for Environmental Self-regulation and implications for environmental performance' (2003) 48 *Journal of Environmental Economics and Management* 632.

Arlen J 'The Potentially Perverse Effects of Corporate Criminal Liability' (1994) 23 *The Journal of Legal Studies* 833.

Ashton G 'An Example of the Impacts of Adopting the 'One Environmental System' of Mining Governance: Some Lessons from MRC's Tormin Mine' (2017) *Conversation around Transparency and Accountability in South Africa's Extractive Sector* 15.

Ashworth A *Principles of Criminal Law* (1991) Oxford University Press, Oxford.

Ayres I & Braithwaite J *Responsive Regulation: Transcending the Deregulation Debate* (1992) Oxford University Press, Oxford.

Bardach E & Kagan RA *Going by the Book: The Problem of Regulatory Unreasonableness* (1982) Temple University Press, Philadelphia.

Becker GS 'Crime and Punishment: An Economic Approach' (1968) 76 *Journal of Political Economy* 169.

Biber E 'Do Voluntary Compliance Programs Improve Environmental Law?' 2015 *Journal of the Things we Like* 435.

Bradbrook A 'Eco-labelling: Lessons from the Energy Sector' (1996) 18 *Adelaide Law Review* 35.

Braithwaite J 'Reward and Regulation' (2002) 29 *Journal of Law and Society* 12.

Braithwaite J 'Rules and Principles: A theory of Legal Certainty' (2002) 27 *Australian Journal of Legal Philosophy* 47.

Bray E 'Co-operative Governance in the Context of the National Environmental Management Act 107 of 1998' (1999) 6 *SAJELP* 1.

Burchell J *Principles of Criminal Law* 5 ed (2016) Juta, Cape Town.

Cane P 'Using Tort Law to Enforce Environmental Regulation?' (2002) 41 *Washburn Law Journal* 427.

Casey JT & Scholz JT 'Beyond Deterrence: Behavioural Decision Theory and Tax Compliance' (1991) 25 *Law and Society Review* 821.

Coglianesi C & Nash J 'Performance Track's Postmortem: Lessons from the Rise and Fall of EPA's Flagship Voluntary Program' (2014) 38 *Harvard Environmental Law Review* 1.

Cohen MA 'Empirical Research on the Deterrent Effect of Environmental Monitoring and Enforcement' (2000) 30 *The Environmental Law Reporter* 10245.

Craigie F, Snijman P & Fourie M 'Dissecting Environmental Compliance and Enforcement' in Paterson A & Kotze LJ (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) Juta, Cape Town.

Croucamp PA & Malan L 'The Theory of Systematic Patronage and State Capture' (2018) 10 *African Journal of Public Affairs* 86.

Csink L & Mayer A 'How to Regulate? The Role of Self-regulation and Co-regulation' 2014 *Hungarian Yearbook of International Law and European Law* 403.

Dassah MO 'Theoretical Analysis of state capture and its manifestation as a governance problem in South Africa' (2018) 14 *The Journal of Transdisciplinary Research in Southern Africa* 1.

De Jager R 'The Potential Implications of Introducing a Carbon Tax in South Africa' (2018) 4 *Journal of Corporate and Commercial Law & Practice* 88.

de Villiers CJ & Lubbe DS 'Industry Differences in respect of Corporate Environmental Reporting in South Africa: A Research Note' (2001) 9 *Meditari Accountancy Research* 81.

De Vos P & Freedman W *South African Constitutional Law* (2014) Oxford University Press, Pietermaritzburg.

Dimento JF *Environmental Law and American Business: Dilemmas of Compliance* (1986) Springer, New York.

Downing P 'Bargaining in Pollution Control' (1983) 11 *Policy Studies Journal* 577.

Erskine CC & Collins L 'Eco-labelling: Success or Failure' (1997) 17 *The Environmentalist* 125.

Etienne J 'Compliance Theory: A Goal Framing Approach' (2011) 33 *Law and Policy* 305.

Farrier D 'In Search of Real Criminal Law' in Bonyhady (ed) *Environmental Protection and Legal Change* (1992) Federation Press, Sydney.

Feris F 'Compliance Notices – A New Tool in Environmental Enforcement' (2006) 9 *PELR* 1.

Fourie M 'How Civil and Administrative Penalties can Change the Face of Environmental Compliance in South Africa' (2009) 16 *SAJELP* 93.

Fromm EM 'Commanding respect: Criminal Sanctions for Environmental Crimes' (1990) 21 *St. Mary's Law Journal* 821.

Gellhorn E 'Adverse Publicity by Administrative Agencies' (1973) 86 *Harvard Law Review* 1380.

Glazewski J, Snijman P & Plit L 'Compliance with and Enforcement of Environmental Laws' in Glazewski J *Commentary on Environmental Law in South Africa*.

Glicksman RL 'Coercive vs. Cooperative Enforcement: Effect of Enforcement Approach on Environmental Management' (2015) 42 *International Review of Law and Economics* 135.

Gore S & Howard G 'One Environmental System: reduced time frames for environmental authorisations applications' 2014 *Environmental Alert* 1.

Grasmick HG & Bursik RJ 'Conscience, Significant Other and rational Choice: Extending the Deterrence Model' (1990) 24 *Law and Society Review* 837.

Gunningham N 'Enforcing Environmental Regulation' (2011) 23 *Journal of Environmental Law* 169.

Hanks J 'Achieving Industrial Sustainable Development in South Africa: What Role for 'Self-regulatory' and Co-regulatory Instruments' (1998) 5 *SAJELP* 298.

Hart HLA *The Concept of Law* 2 ed (1994) Oxford University Press, Oxford.

Hawkins K 'Compliance Strategy, Prosecution Policy, and Aunt Sally – A Comment on Pearce and Tombs' (1990) 30 *The British Journal of Criminology* 444.

Hawkins K 'Creating Cases in a Regulatory Agency' (1984) 12 *Urban Life* 371.

Hawkins K 'Enforcing Regulation: More of the Same from Pearce and Tombs' (1991) 31 *The British Journal of Criminology* 427.

Hawkins K *Environment and Enforcement: Regulation and the Social Definition of Pollution* (1984) Oxford University Press, Oxford.

Hawkins K *Law as a Last Resort: Prosecution Decision-making in a Regulatory Agency* (2002) Oxford University Press, Oxford.

Heaton J *The South African Law of Persons* 5 ed (2017) LexisNexis, Durban.

Henderson PGW 'Fiscal Incentives for Environmental Protection – Conceptual Framework' (1995) 1 *SAJELP* 55.

Henderson PGW 'Fiscal Incentives for Environmental Protection – Introduction' (1994) 1 *SAJELP* 49.

Henderson PGW 'Fiscal Incentives for Environmental Protection – The Way Forward' (1995) 2 *SAJELP* 151.

Hillary R 'Environmental Auditing: Concepts, Methods and Developments' (1998) 2 *International Journal of Auditing* 71.

Hilson C *Regulating Pollution* (2000) Hart Publishing, Oxford.

Hoexter C *Administrative Law in South Africa* 2 ed (2012) Juta, Cape Town.

Humby T 'One Environmental System: Aligning the Laws on the Environmental Management of Mining in South Africa' (2015) *Journal of Energy and Natural Resources Law* 110.

- Husak DN 'Retribution in Criminal Theory' (2000) 37 *San Diego Law Review* 959.
- Jefferson M 'Corporate Liability: The problem of Sanction' (2001) 65 *The Journal of Criminal Law* 235.
- Kagan RA & Scholz JT 'The "Criminology of the Corporation" and Regulatory Enforcement Strategies' in Hawkins K & Thomas JM (eds) *Enforcing Regulations* (1984) Kluwer-Nijhoff, Boston.
- Kidd M 'Alternatives to the Criminal Sanction in the Enforcement of Environmental Law' (2002) 9 *SAJELP* 21.
- Kidd M 'Criminal Measures' in Paterson A & Kotze LJ (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) Juta, Cape Town.
- Kidd M 'Environmental Audits and Self-incrimination' (2004) 37 *Comparative and International Law Journal of Southern Africa* 84.
- Kidd M 'Environmental Crime – Time for a Rethink in South Africa?' (1998) 5 *SAJELP* 181.
- Kidd M 'Sentencing Environmental Crimes' (2004) 11 *SAJELP* 53.
- Kidd M *Environmental Law* 2 ed (2011) Juta, Cape Town.
- Kinsey R, Lea J & Young J *Losing the Fight Against Crime* (1986) Basil Blackwell, New York.
- Kotze LJ 'Environmental Governance' in Paterson A & Kotze LJ (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) Juta, Cape Town
- Kreps DM *A Course in Microeconomic Theory* (1990) Princeton University Press, New Jersey.
- Lehmann K 'Voluntary Compliance Measures' in Paterson A & Kotze LJ (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) Juta, Cape Town.
- Lenox MJ & Nash J 'Industry Self-regulation and Adverse Selection: A Comparison Across Four Trade Association Programs' (2003) 12 *Business Strategy and the Environment* 343.
- Lesinski BC 'Environmental Management System' (2002) 20 *Preventive Law Reporter* 3.
- Loots C 'Making Environmental Law Effective' (1994) 1 *SAJELP* 17.
- Magat WA & Viscusi WK 'Effectiveness of the EPA's Regulatory Enforcement: The Case of Industrial Effluent Standards' (1990) 33 *The Journal of Law and Economics* 331.

- Malloy TF 'Regulation, Compliance and the Firm' (2003) 76 *Temple Law Review* 451.
- Mank BC 'Superfund Contractors and Agency Capture' (1993) 2 *NYU Environmental Law Journal* 34.
- March JG & Olsen JP 'The Institutional Dynamics of International Political Orders' (1998) 52 *International Organisation* 943.
- McMurray RI & Ramsey SD 'Environmental Crime: The Use of Criminal Sanctions in Enforcing Environmental Law' (1986) 19 *Loyola of Los Angeles Law Review* 1133.
- Michael DC 'Cooperative Implementation of Federal Regulations' (1996) 13 *Yale Journal on Regulation* 535.
- Mikulich C 'ISO 14000 – 14001, The Developing World's Perspective' (2003) 17 *Tulane Environmental Law Journal* 117.
- Moyo PA 'Private Certification versus Public Certification in the International Environmental Arena: The Marine Stewardship Council and Marine Eco-label Fisheries Certification Schemes as Case Studies' (2010) 43 *Vanderbilt Journal of Transnational Law* 533.
- Nahman A, Godfrey L & Wise R 'Market-based Incentives in South Africa' (2008) 108 *WIT Transactions on Ecology and the Environment* 137.
- Nel JG & Wessels JA 'How to use Voluntary, Self-regulatory and Alternative Environmental Compliance Tools: Some Lessons Learnt' (2010) 13 *PELR* 48.
- Ogus A 'Rethinking Self-regulation' (1995) 15 *Oxford Journal of Legal Studies* 97.
- Packer HL *The Limits of the Criminal Sanction* (1968) Stanford University Press, Stanford.
- Paterson A 'Incentive-based Measures' in Paterson A & Kotze LJ (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) Juta, Cape Town.
- Paterson A & Kotze LJ 'Towards a more Effective Environmental Compliance and Enforcement Regime for South Africa' in Paterson A & Kotze LJ (eds) *Environmental Compliance and Enforcement in South Africa Legal Perspectives* (2009) Juta, Cap Town.
- Pearce F & Tombs S 'Ideology, Hegemony and Empiricism: Compliance Theories of Regulation' (1990) 30 *The British Journal of Criminology* 423.

Pearce F & Tombs S 'Policing Corporate Skid Rows A Reply to Keith Hawkins' (1991) 31 *The British Journal of Criminology* 415.

Pinckard L 'ISO 14000 – Trade and Environment' (1996) 8 *Colorado Journal of International Environmental Law and Policy* 37.

Portfolio Committee on Mineral Resources Research Unit *DMR Disregards Key Monitoring Provisions of NEMA and the One Environmental System for Mining* (2019) unpublished parliamentary document presented to the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 19 November 2018 (copy on file with author).

Portfolio Committee on Mineral Resources Research Unit *Mineral Resources: Note after the Colloquium on the One Environmental System* (2019) unpublished parliamentary document presented at the Colloquium on the One Environmental System convened by the Portfolio Committee on Environmental Affairs at the Parliament of the Republic of South Africa, 20 November 2018 (copy on file with author).

Reasons C 'Crimes Against the Environment: Some Theoretical and Practical Concerns' (1991) 34 *Criminal Law Quarterly* 86.

Rechtschaffen C 'Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement' (1998) 71 *Southern California Law Review* 1181.

Rechtschaffen C & Markell DL *Reinventing Environmental Enforcement and the State/Federal Relationship* (2003) Environmental Law Institute, Washington DC.

Reville NJ 'The Shifting Sands of Manslaughter' (1991) 55 *Journal of Criminal Law* 228.

Ridl J & Couzens E 'Misplacing NEMA? A Consideration of Some Problematic Aspects of South Africa's New EIA Regulations' (2010) 13 *PELJ* 80.

Robinson PH & Darley JM 'Does Criminal Law Deter? A Behavioural Science Investigation' (2004) 24 *Oxford Journal of Legal Studies* 173.

Saxe D *Environmental Offences: Corporate Responsibility and Executive Liability* (1990) Canada Law Book, Ontario.

Schelling TC *Incentives for Environmental Protection* (1983) MIT Press, Cambridge.

Scholtz W 'Co-operative and Participatory Governance via the Implementation of Environmental Management Co-Operation Agreements' (2004) 11 *SAJELP* 183.

Scholtz W 'Introduction of Environmental Management Co-operation Agreements in South Africa' (2004) 11 *SAJELP* 31.

Scholz JT 'Cooperation, Deterrence and the Ecology of Regulatory Enforcement' (1984) 18 *Law and Society Review* 179.

Shapiro M *Who Guards the Guardians: Judicial Control of Administration* (1998) University of Georgia Press, Georgia.

Sharrock R *Business Transactions Law* 9 ed (2016) Juta, Cape Town.

Shover N & Routhe AS 'Environmental Crime' (2005) 32 *Crime and Justice* 321.

Simon HA *Models of Bounded Rationality: Behavioural Economics and Business Organisation* (1982) MIT Press, Massachusetts.

Smith S 'An Iron Fist in a Velvet Glove: Redefining the Role of Criminal Prosecution in Creating an Effective Environmental Enforcement System' (1995) 19 *Criminal Law Journal* 12.

Snyman CR *Criminal Law* 6 ed (2014) LexisNexis, Durban.

Soltau F 'The National Environmental Management Act and Liability for Environmental Damage' (1999) 6 *SAJELP* 33.

Spence DB 'The Shadow of the Rational Polluter: Rethinking the Role of Rational Actor Models in Environmental Law' (2001) 89 *California Law Review* 917.

Stigler GJ 'The Optimum Enforcement of Laws' in Becker GS & Landes WM (eds) *Essays in the Economics of Crime and Punishment* (1974) Palgrave Macmillan, London.

Stranz NJ 'Case Comment: R v Bata Industries Ltd' (1993) 31 *Alberta Law Review* 729.

Sutherland E *White-Collar Crime: The Uncut Version* (1983) Yale University Press, New Haven.

Taylor DAJ 'Is ISO 14001 Standardization in Tune with Sustainable Development? Symphony or Cacophony?' (1998) 13 *Journal of Environmental Law and Litigation* 509.

Terblanche S 'Sentencing' (2009) 22 *SACJ* 127.

Terblanche S 'Sentencing' (2018) 3 *SACJ* 465.

- Tietjie C 'Voluntary Eco-labelling programmes and Questions of State Programmes and Questions of State Responsibility in the WTO/GATT Legal System' (1995) 29 *Journal of World Trade* 123.
- Toriola T 'A Blind Commitment or Strategic Approach' (2015) 15 *Without Prejudice* 66.
- Tyler TR & Darley JM 'Building a Law-Abiding Society: Taking Public Views about Morality and the Legitimacy of Legal Authorities into Account when Formulating Substantive Law' (1999) 28 *Hofstra Law Review* 707.
- Tyler TR *Why People Obey the Law* (1990) Yale University Press, New Haven & London.
- van der Merwe A 'Sentencing' (2016) 29 *SACJ* 363.
- van der Walt A 'Civil Forfeiture of Instrumentalities and Proceeds of Crime and the Constitutional Property Clause' (2000) 16 *SA Journal on Human Rights* 1.
- Van Rooij B *Regulating Land and Pollution in China: Lawmaking, Compliance and Enforcement; Theory and Cases* (2006) Leiden University Press, Leiden.
- Wertheimer R 'Understanding Retribution' (1983) 19 *Criminal Justice Ethics* 19.
- White CC 'Regulation of Leaky Underground Fuel Tanks: An Anatomy of Regulatory Failure' (1996) 14 *UCLA Journal of Environmental Law and Policy* 105.
- Wilke K *What is in it for me: Exploring Natural Capital Incentives* (2005) Canada West Foundation, Calgary.
- Wilson JD 'Re-thinking Penalties for Corporate Environmental Offenders: A View of the Law Reform Commission of Canada's Sentencing in Environmental Cases' (1986) 31 *McGill Law Journal* 313.
- Wilson JQ *What Government Agencies Do and Why They Do it* (1990) Basic Books, New York.
- Winkler H 'Reducing Energy Poverty through Carbon Tax Revenues in South Africa' (2017) 28 *Journal of Energy in Southern Africa* 12.
- Winstanley T 'Administrative Measures' in A Paterson & LJ Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives* (2009) Juta, Cape Town.

Yeager PC *The Limits of the Law: The Public Regulation of Private Pollution* (1991) Cambridge University Press, Cambridge.

Zaelke D, Kaniaru D & Kruzikova E *Making Law Work: Environmental Compliance and Sustainable Development* vol 1 (2005) Cameron May, London.

Zaelke D, Stilwell M & Young O 'What Reason Demands: Making Law Work for Sustainable Development' in Zaelke D, Kaniaru D & Kruzikova E (eds) *Making Law Work: Environmental Compliance and Sustainable Development* vol 1 (2005) Cameron May, London.

Theses

Carelse SL *A System for Integrated Environmental Management in Local Authorities to Inform Departmental Decision-making: The Case of Hessequa Municipality* (unpublished Masters in Public Administration, Stellenbosch University, 2016).

Kidd M *The Protection of the Environment through the Use of Criminal Sanctions: A Comparative Analysis with Specific Reference to South Africa* (unpublished PhD Thesis, University of KwaZulu Natal, 2002).

Seekoe GV *The Environmental Management Cooperation Agreement as a Co-Operative Environmental Governance Tool in a Segmented Environmental Administration* (unpublished LLM Thesis, North West University, 2017).

van Schalkwyk CL *A Legal Perspective on the Role of Municipalities in Navigating the Relationship between Land Use Planning and Mining* (unpublished PhD Thesis, University of Cape Town, 2019).

van Zyl E *The Regulation of Eco-labelling in South Africa: A Comparative Analysis* (unpublished LLM Thesis, Northwest University, 2004).

Online Sources

Badenhorst W 'The Delphic Provisions' *Hogen Lovells* 30 March 2017 available at <https://www.hoganlovells.com/en/publications/the-delphic-provision>, accessed on 10 April 2017.

Baker L, Burton J, Godhino C et al 'The Political Economy of Decarbonisation: Exploring the Dynamics of South Africa's Electricity Sector' (2015) Research Report by the Energy Research Centre at the University of Cape Town 48 available at

http://www.erc.uct.ac.za/sites/default/files/image_tool/images/119/Papers-2015/15-Baker-et-al-Political_economy_decarbonisation.pdf, accessed 03 June 2019.

Centre for Environmental Rights ‘Mining Companies Launch their First Attacks on the One Environmental System’ available at <http://cer.org.za/news/mining-companies-launch-their-first-attacks-on-the-one-environmental-system>; accessed on 03 April 2017

Centre for Environmental Rights ‘Zero Hour: Poor Governance of Mining and Violation of Environmental Rights in Mpumalanga’ May 2016 available at <https://cer.org.za/news/zero-hour>, accessed 15 March 2018.

Davies T & Fourie M ‘Conflict of Interest in Monitoring Green Laws’ *Business Live* 30 March 2017 available at <https://www.businesslive.co.za/bd/opinion/2017-03-30-conflict-of-interest-in-monitoring-green-laws/> accessed on 16 April 2017.

Department of Energy ‘Integrated Resource Plan for Electricity 2010 – 2030 Update Report’ 21 available at http://www.energy.gov.za/IRP/irp%20files/IRP2010_2030_Final_Report_20110325.pdf, accessed 03 June 2019.

Department of Environmental Affairs and Tourism ‘Integrated Environmental Management Information Series 17 Environmental Reporting’ (2005) 5 available at https://www.environment.gov.za/documents/strategies/integrated_environmentalmanagement_eim accessed 06 2019.

Department of Mineral Resources ‘Government on rollout of One Environmental System’ available at <http://www.gov.za/government%E2%80%99s-one-environmental-system-ready-commence-8th-december-2014> accessed on 3 April 2017.

Department of Planning, Monitoring and Evaluation *Report on the Implementation Evaluation of the Environmental Governance in the Mining Sector* (2015) 45 available at <https://evaluations.dpme.gov.za/evaluations/510/documents/ae4636ed-1319-46e3-a03e-7536e7d9a4ec> accessed 23 March 2018.

Diemont M, C Pillay & G Rapson ‘Environmental regulation of the mining industry’ *Lexology* 02 September 2014, available at <https://www.lexology.com/library/detail.aspx?g=dafa2598-0b1b-42c7-9cbf-02aebdd46d5f> accessed 14 August 2017.

Enviropaedia ‘Environmental Management Systems’ available at http://www.enviropaedia.com/topic/default.php?topic_id=98 accessed on 20 June 2019.

Forrest K & Loate L ‘Coal, Water and Mining Flowing Badly’ *Society, Work & Development Institute* June 2017 available at https://www.fes-southafrica.org/fileadmin/user_upload/coal_water_and_minig_flowng_badly.pdf, accessed 23 February 2018.

Green Africa Directory ‘Green Certifications’ available at <http://www.greenafricadirectory.org/resources/green-certifications/> accessed 10 June 2019

Hellman JS, Jones G & Kaufmann D ‘Seize the State, Seize the Day: State Capture, Corruption and Influence in Transition’ (2000) *The World Bank Policy Research Working Paper 2444* available at <http://siteresources.worldbank.org/INTABCDEWASHINGTON2000/Resources/hellman.pdf> accessed on 30 March 2019.

International Organisation for Standardisation ‘ISO 14000 Family – Environmental Management’ available at <https://www.iso.org/iso-14001-environmental-management.html>, accessed 10 June 2019.

International Organisation for Standardisation ‘ISO 14000 Family – Environmental Management’ available at <https://www.iso.org/iso-14001-environmental-management.html>, accessed 10 June 2019.

Laprecht I ‘Study Suggests Carbon Tax will have Modest Growth Impact’ *Moneyweb* 11 November 2016 available at <https://www.moneyweb.co.za/mymoney/moneyweb-tax/study-suggests-carbon-tax-will-have-modest-growth-impact/> accessed 03 June 2019.

Merven B, Moyo A, A Stone et al ‘Socio-economic Implications of Mitigation in the Power Sector Including Carbon taxes in South Africa’ (2014) Working paper for CDKN Project on Linking Sectoral and economy-wide models by the Energy Research Centre at the University of Cape Town available at <https://open.uct.ac.za/handle/11427/16897> accessed 03 June 2019.

Naidoo B ‘One Environment System to stamp out over-regulation’ available at <http://businessmediamags.co.za/one-environmental-system-to-stamp-out-over-regulation/>, accessed on 03 April 2017.

National Treasury ‘Draft Policy Paper: A Framework for Considering Market-based Instruments to Support Environmental Fiscal Reform in South Africa’ (2006) 70 available at <http://www.treasury.gov.za/public%20comments/Draft%20Environmental%20Fiscal%20Reform%20Policy%20Paper%206%20April%202006.pdf>, accessed on 03 June 2019.

National Treasury ‘Explanatory Memorandum for the Carbon Tax Bill’ (2018) available at http://www.treasury.gov.za/comm_media/press/2018/2018112101%20Explanatory%20Memorandum%20to%20the%202018%20Carbon%20Tax%20Bill%20-%2020%20Nov%202018.pdf, accessed 03 June 2019.

National Treasury ‘Media Statement – Publication of the 2019 Carbon Tax Act’ available at <https://www.gov.za/speeches/publication-2019-carbon-tax-act-26-may-2019-0000> accessed 06 June 2019.

Parliament of the Republic of South Africa ‘How a law is made’ available at <https://www.parliament.gov.za/how-law-made> accessed on 15 April 2019.

Parliamentary Monitoring Group ‘Mine Environmental Management: Briefing by the Departments of Environmental Affairs and Mineral Resources’ 10 September 2013, available at <https://pmg.org.za/committee-meeting/16338/> accessed on 17 February 2019.

Parliamentary Monitoring Group ‘One Environmental System Colloquium’ 20 November 2018 available at <https://pmg.org.za/committee-meeting/27570/>, accessed 28 March 2019.

SAMCODES Standards Committee ‘About SAMCODES’ available at <https://www.samcode.co.za/samcode-ssc/about-samcodes> accessed on 20 June 2019.

South African Bureau of Standards ‘Environmental Management Services’ available at https://www.sabs.co.za/Sectors-and-Services/Services/EMS/ems_seriesofstandards.asp accessed 10 June 2019.

South African Human Rights Commission *National Hearings on the Underlying Socio-economic Challenges of Mining-affected Communities in South Africa* (2016) at 1 available at <https://www.sahrc.org.za/home/21/files/SAHRC%20Mining%20communities%20report%20FINAL.pdf> accessed 17 February 2018.

Stoddard E ‘South Africa’s Carbon Tax Raises Questions and Hot Air’ *Daily Maverick* 3 June 2019, available at <https://www.dailymaverick.co.za/article/2019-06-03-south-africas-carbon-tax-raises-questions-and-hot-air/>, accessed on 06 June 2019.

The World Wide Fund for Nature (WWF) 'The Carbon Tax 2019 Explained' available at https://www.wwf.org.za/our_news/news/?28421/The-Carbon-Tax-2019-explained accessed 03 June 2019.

Timilsinis GR 'Where is the Carbon Tax after Thirty Years of Research?' (2018) World Bank Policy Research Working Paper 8493 57 available at <http://documents.worldbank.org/curated/en/209041530236682559/Where-is-the-carbon-tax-after-thirty-years-of-research> accessed 03 June 2019.

United States Agency for International Development (USAID) 'Greenhouse Gas Emissions in South Africa' 1 available at <https://www.climatelinks.org/resources/greenhouse-gas-emissions-factsheet-south-africa>, accessed 03 June 2019.

Yield J 'GroundUp: Critical Court Shutdown on Mining and Environment' *Daily Maverick* 19 February 2017 available at <https://www.dailymaverick.co.za/article/2017-02-19-groundup-critical-court-showdown-on-mining-and-environment/#.WWJ0VoiGPiV> accessed on 3 April 2017.