A critical evaluation of negotiated environmental agreements - a case study from South Africa

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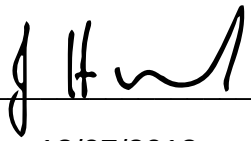
DECLARATION

I, Jennifer Howarth, declare that *A critical evaluation of negotiated environment agreements – a case study from South Africa* is my own work and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

Signature: 

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My parents for teaching me the value of education and knowledge.

Abstract

This research critically evaluates negotiated environmental agreements in South Africa and entails a single case study in the mining industry regarding the use of a voluntary environmental agreement to prevent water pollution.

The objectives of the research include the identification of criteria for evaluating negotiated environmental agreements and the critical evaluation of a negotiated environmental agreement in South Africa within its own regulatory regime.

This is a phenomenological study as the author was involved in the process of negotiating and drafting the environmental agreement. Data was collected in the form of a literature review, interviews with role players involved in the case study, and the review of relevant documents, including policies and procedures.

The researcher identified a number of criteria for the successful conclusion of negotiated environmental agreements in the mining industry in South Africa. These included a legal and policy framework; mutual trust between parties; a clear desire by both parties to reach a mutually satisfactory agreement; the so-called "soft effect" (which relates to changes in attitude and awareness); community trust in the industry; a public participation process; clear and measurable objectives, targets and time frames as well as negotiated commitments; clearly established monitoring procedures; sufficient sanctions or incentives to ensure compliance; adequate financial and human resources; the extent to which the voluntary agreement contributed to the achievement of the objectives in terms of environmental effectiveness; whether the voluntary agreement promotes compliance with the objectives of the applicable legislation; and stakeholders established for ongoing monitoring and reporting of implementation of the voluntary agreement. A critical evaluation of the agreement of the case study at hand reflected that certain of the identified criteria were not met.

Key words: negotiated environmental agreements, evaluation, single case study, mining industry, criteria, phenomenological study

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Acronyms

cf.	confer, meaning ‘compare’ to refer the reader to other material to make a comparison with the topic being discussed
COP	Code of Practice
DEAT	Department of Environmental Affairs and Tourism
DMR	Department of Mineral Resources
DWAS	Department of Water and Sanitation
EMCA	Environmental management co-operation agreement
EMS	Environmental management system
FRD	Fines Residue Deposit (referred to as an “MRD or Mine Residue Deposit” in the guideline)
ISO	International Organisation for Standardisation
IWULA	Integrated water user licence application
MPRDA	Mineral and Petroleum Resources Development Act 28 of 2002
NEMA	National Environmental Management Act 107 of 1998
NWA	National Water Act 36 of 1998

CHAPTER 1

1.1 Introduction

The aim of this research was to critically evaluate negotiated environmental agreements within a complex regulatory regime. As part of environmental governance, a myriad of legislative provisions is applied globally and in particular in South Africa (Alberts *et al.*, 2015:3). These include Acts and regulations and other forms of legal instruments, one of which is negotiated agreements. This study is important as it can shed some light on the use of voluntary agreements in industry, and more specifically the mining industry, highlighting the obstacles in the use thereof as a legislative tool in mining. It is notable that negotiated agreements are under-utilised (Fischer, 2005:10) and this dissertation seeks to shed some light on the use thereof. This will entail establishing the criteria for successful negotiated environmental agreements and also to establish the successes thereof in South Africa.

This study is specifically based on a case study of a situation which necessitated the drafting of an agreement between two parties which can be construed as an Environmental Management Co-operation Agreement (EMCA), one of the voluntary tools available for the purpose of preventing pollution (Fischer, 2005:13). In this instance, it was aimed specifically at the prevention of pollution of water resources.

It is almost an oxymoron to refer to the earth's population as 'mankind', since we as 'man' have been anything but 'kind to Mother Nature. For centuries now we have been using and, in many instances, depleting the natural resources at our disposal, in other words we are living 'unsustainably' (Miller & Spoolman, 2012:12).

One of the Native American Ten Commandments reads "Treat the Earth and all that dwell therein with respect" (Legends of America, 2016). We as modern day human beings do not adhere to this at all. If we were living sustainably, we would be living in such a way that we would be passing on a better world to generations to come and taking from Mother Earth only what we need.

The concept of sustainable development emerged in 1992 when more than 100 heads of state met in Rio de Janeiro, Brazil, for the United Nations Conference on Environment and Development (UNCED) (Kidd, 2011:55). This was also known as

the Earth Summit and was convened to address urgent problems of environmental protection and socio-economic development. Agenda 21, a 300 page plan for achieving sustainable development in the 21st century, was adopted during the Earth Summit (Parry-Davis, 2004:189).

The challenges for natural resource management are complex and necessitate co-operation among the various role players to achieve development sustainably. According to Müller (2013:83), the "fragmentation and lack of co-ordination among the various executing agencies represent a significant hurdle and a barrier to successful implementation".

South Africa produced a White Paper on Integrated Pollution and Waste Management for South Africa (2000). According to the White Paper "[i]ntegrated pollution and waste management is a holistic and integrated system and process of management, aimed at pollution prevention and minimisation at source, managing the impact of pollution and waste on the receiving environment and remediating damaged environments" (Kidd, 2011:208).

Although there has been significant progress in South Africa with policies and laws promulgated since 1994 to address environmental concerns, the environmental legislation of South Africa is very fragmented (Kotzé, 2010:113). This remains a challenge in terms of the interpretation and enforcement thereof (Kotzé, 2010:114). As indicated in the diagram below, the Constitution (1996) provides the point of departure for policy and law making in this country and contains far-reaching clauses relevant to the environment. Embedded within the Bill of Rights is an environmental clause which provides that "everyone has the right to an environment that is not harmful to their health or well-being" (section 24 of the Constitution). Part (b) of this clause gives government the responsibility "to take reasonable measures to ensure that the environment is protected for the benefit of present and future generations." (Kidd, 2011:22).

The National Environmental Management Act (107 of 1998) (NEMA) provides an overall framework for environmental management and also provides for environmental management "to take place in a more pro-active, co-operative and conciliatory manner" (DEAT, National Framework Document, 2002:8). NEMA is largely based on

the principles and strategic goals and objectives contained within the White Paper on Environmental Management Policy for South Africa (1998) and NEMA embraces the concept and principles of sustainable development. These were set out in the Brundtland Report (WCED, 1987) which also promoted the notion of co-operative governance and partnerships (DEAT, National Framework Document, 2002:9).

In order to demonstrate the complexity and fragmentation of environmental legislation in South Africa one needs to have an overview thereof. The diagram below illustrates an overview of framework legislation.

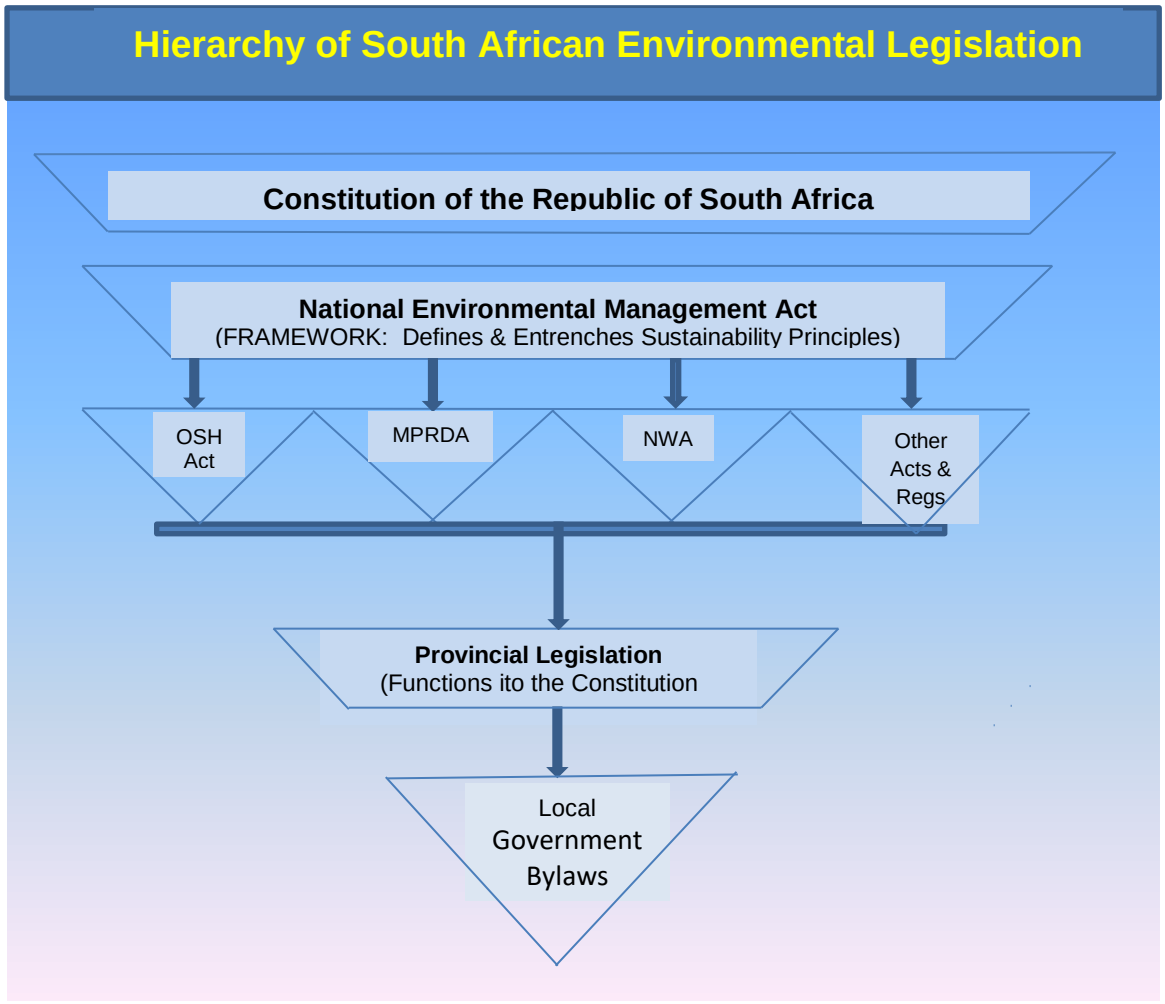

Figure 1: South African Environmental Law Framework (Alberts, 2013)

The South African Environmental Law Framework consists of framework legislation, or primary legislation, which is the Constitution and NEMA. Various sectoral acts regulate other environmental matters, such as the National Water Act 36 of 1998 (NWA) and the Mineral and

Petroleum Resources Development Act 28 of 2002 (MPRDA). Both these acts play a pivotal role in this research and will be discussed more fully later in the document. The various provinces have provincial legislation applicable to their areas of responsibility and then there are local bylaws applied by the municipalities or local authorities. Other legislation applicable specifically to this research includes secondary legislation which consists of regulations, norms and standards, including ISO 14001:2004, a standard of the International Organisation for Standardisation (ISO 14001). Although NEMA is framework legislation and gives effect to the environmental provisions in the Constitution, it has some drawbacks, one of which is the fact that the provisions of section 2 of NEMA relating to the principles of environmental management are not enforceable *per se* as no sanctions have been set for non-compliance thereof.

For the purposes of this study the environmental law framework discussed above is elaborated upon in Table 1 below to illustrate how complex it becomes when focused specifically on mining.

Table 1: Environmental legislation applicable to this case study (Adapted from Alberts *et al.*, 2017:4-5; Data Dynamics Law Library; Bray, 2010:158-159).

LEGISLATION	**APPLICABILITY**
Acts of Parliament	
Constitution of the Republic of South Africa 1996	The Constitution provides for the right to an environment which is not harmful to human health and well-being and it promotes sustainable development. It contains provisions preventing pollution and ecological degradation.
National Environmental Management Act 107 of 1998	This is framework legislation which gives effect to the environmental right in the Constitution.
Minerals Act 50 of 1991	This Act was repealed by the MPRDA except for section 9 thereof which deals with Sunday Labour permissions and relates mainly to health and safety.
Mineral and Petroleum Resources Development Act 28 of 2002	Mineral rights are granted in terms of this Act.
National Water Act 36 of 1998	This Act regulates the use of water and the protection of water resources as a national asset. It prevents pollution of water sources and is pivotal to this study

	regarding potential pollution in respect of the management of the FRD.
Mine Health and Safety Act 29 of 1996	It deals with the health and safety of employees in the mining industry, but it also contains environmental provisions relevant to the construction and management of FRDs and the guidelines for Codes of Practice thereof.
Hazardous Substances Act 15 of 1973	This Act deals with the use, handling and disposal of hazardous substances. In this study, Group IV relating to nuclear sources will be applicable.
Nuclear Energy Act 46 of 1999	In this Act, the management of nuclear or radioactive sources are dealt with.
National Environmental Management: Waste Act 59 of 2008	The management, transport and disposal of waste are dealt with in this Act and it includes mining waste such as the FRD.
National Environmental Management: Protected Areas Act 57 of 2003	Mining may not take place in certain declared protected areas.
National Environmental Management: Air Quality Act 39 of 2004	The deposition of tailings would resort under this Act as it regulates ambient air quality.
Conservation of Agricultural Resources Act 43 of 1983	This Act stipulates provisions regarding the eradication of invader weeds and plants (more specifically Regulation 1048 of 1984 thereof).
Various provincial environmental legislation	Various provincial governments have drafted environmental legislation pertaining to land use.
Local bylaws (local municipal level)	Many local municipalities have local bylaws which may pertain, *inter alia*, to nuisance and the disposal of effluent.
Explosives Act 26 of 1956	The Explosives Act regulates the use of explosives and the disposal thereof. The use of explosives can affect the level of nitrates which occur in FRD's.
Fertilizers, Farm Feeds and Stock Remedies Act 36 of 1947	An administrator of pest control substances must be registered as a registered pest control operator.

National Forests Act 84 of 1998	Certain trees enjoy protection as listed from time to time by the provisions of this Act.
National Road Traffic Act 93 of 1996	The transport of dangerous goods is regulated by this Act (R225 of 2000).
National Veld and Forest Fire Act 101 of 1998	This Act regulates fire breaks and firefighting equipment to be on standby and serviced regularly.
Occupational Health and Safety Act 85 of 1993	Although the Occupational Health and Safety Act does not apply to mining sites *per se*, some of its regulations do apply, for example, the Construction regulations and Asbestos regulations.
Promotion of Access to Information Act 2 of 2000	This Act gives effect to the provisions in the Constitution regarding access to information which is linked to locus standi. Organisations are obliged to keep record of all their environmental impacts and to make these available to persons who may feel that their rights to a clean and healthy environment have been infringed.
Promotion of Administrative Justice Act 3 of 2000	PAJA gives effect to section 33(3) of the Constitution with which public authorities must comply when performing administrative actions. It provides some form of leverage to the mining industry when dealing with public authorities.
Protected Disclosures Act 26 of 2000	This Act serves the purpose of protecting an employee who makes a disclosure in the event that he or she is of the opinion that certain activities are detrimental to the environment.
Water Services Act 108 of 1997	This Act deals with the disposal of industrial effluent.
Other regulations (not already referred to elsewhere in this table):	
GNR 982, 983, 984 in GG 38282 of 4 December 2014 – Environmental impact regulations and listed activities	In these regulations, certain activities are listed which require environmental assessment and authorisation before they may be undertaken. The construction of an FRD resorts hereunder.

GNR 632 in GG 39020 of 24 July 2015 – Management of residue deposits and residue stockpiles	These regulations contain provisions regarding the management of residue deposits and residue stockpiles and would therefore apply to the FRD.
GNR 704 in GG 20119 of 4 June 1999 – Regulations for the use of water for mining and related activities and the protection of water resources	This regulation was promulgated in terms of the NWA and contains specific provisions related to the separation of clean and dirty water systems at mines.

Recent years have seen the integration of various management tools and instruments to achieve sustainability. According to Iqbal (cited by Nel & Du Plessis, 2001:13), tools and instruments may be classified in four general disciplines, being command and control, fiscal arrangements, agreements and civil-based instruments and tools as set out in Figure 3 below.

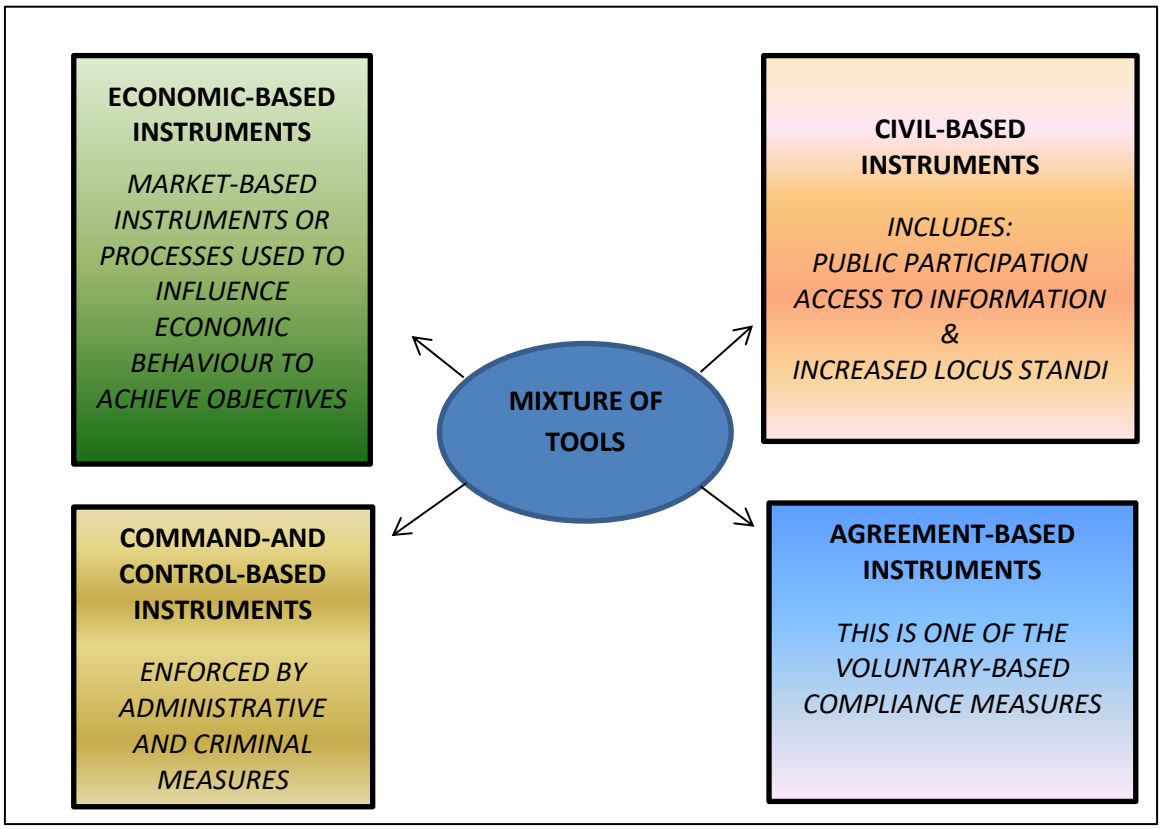

Figure 2: Generic classes of environmental management and governance instruments (Adapted from Nel & Du Plessis, 2001:13-15; Paterson, 2010:296; Lehmann, 2010:274).

The traditional command-and-control approach has had the monopoly, or "over-reliance", as stated by Nel and Wessels (2011:2), but one of the other environmental management tools that has also been developed and implemented in recent years is voluntary agreements. The environmental management instruments, as stated above, are as follows:

Table 2: Environmental instruments (Adapted from Nel & Du Plessis, 2001:15-16)

Environmental management instrument	Description
Command and control	These include regulatory instruments including standards, permits or licenses, monitoring, penalties, etc.
Civil	Instruments such as training, creation of awareness on environmental aspects, stakeholder engagement and involvement, information sharing, assistance to interested and affected parties and eco-labelling.
Fiscal	Economic instruments such as payment (these include pollution taxes or charges, natural resource taxes) as well as government subsidies.
Voluntary	Instruments such as ISO 14001 environmental management systems, voluntary certification, agreements between industry and government.

As the focus of this research is that of the voluntary instrument, this will be discussed in more detail. According to Nel and Wessels (2011:4), voluntary agreements may have enforceable elements contained in enforceable agreements such as EMCAs. Section 35 of NEMA provides for EMCAs in terms whereof any person or community can enter into an agreement on a matter regarding the protection of the environment and to promote compliance with the principles of NEMA. According to section 35(3) of NEMA, the agreement may contain certain provisions relating to targets and reporting in terms of the performance on those targets, monitoring, regular inspections and penalties for non-compliance with the terms of the agreement. In the context of this paper, the agreement between the relevant parties, as described later in the paper, is regarded as an EMCA even though it does not conform strictly to the definition thereof in NEMA as there was no government party involved. More criteria of EMCAs are discussed in greater detail later in this document. Although negotiated environmental agreements can be used as an effective voluntary tool for the promotion of sustainable development, the successes and challenges thereof are not well documented in the South African academic literature (Scholtz 2004:50). In establishing the effectiveness of

such an EMCA and whether it does indeed fulfil the function of ensuring compliance with environmental legislation, this case study was found to test this.

Organisations are implementing controlled self-regulation, for example, Environmental Management Systems (EMSs). NEMA provides for international environmental instruments in section 25. In South Africa, the ISO 14001:2004 based standard of the International Organisation for Standardisation (ISO 14001) has been used to assess compliance with EMSs within mining organisations. (This has recently been upgraded to ISO 14001:2015, Edition 3). As pointed out by Nel and Du Plessis (2001:60), ISO 14001:1996 (Element 4.5.5 thereof) specifies that regular environmental audits be conducted to ascertain compliance with legal and other requirements.

As environmental management entails the regulation of the effects of people's activities, products and services on the environment with environmental law as the basis thereof (Nel & Kotze, 2013:1), one of the parties of this case study implemented the ISO 14001 environmental management system to manage the impact of its activities on the environment. During a legal compliance audit conducted by an external auditing company in terms of ISO 14001, a critical non-conformance was identified in respect of the management of the Fines Residue Deposit (FRD) located within the mining area of the company. The non-conformance, if not addressed, could have led to pollution of a water resource and would have impacted on the certification process of the relevant party.

Section 2 of NEMA contains certain principles to be considered to ensure that development must take place sustainably, including that pollution and degradation of the environment should be avoided, or where it cannot be altogether avoided, it should be minimised and remedied (section 4(a)(ii)). According to section 37(1) of the MPRDA, the national environmental management principles in section 2 of NEMA apply to all prospecting and mining operations. Any prospecting or mining operation must be conducted in accordance with generally accepted principles of sustainable development by integrating social, economic and environmental factors into the planning and implementation of prospecting and mining projects (Kidd, 2011:221). One of the objectives of the NWA is the reduction and prevention of pollution and degradation of water resources. Apart from the fact that this critical non-conformance identified during the audit was a contravention of section 2 of NEMA, it was also a contravention of various other pieces of legislation, including section 19 of the NWA which states:

> *"(1) An owner of land, a person in control of land or a person who occupies or uses the land on which –*

(a) Any activity or process is or was performed or undertaken; or

(b) Any other situation exists, which causes, has caused or is likely to cause pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring."

Furthermore, a regulation was promulgated in terms of the NWA dealing with provisions to be put in place with regard to the construction of water systems at a mine to prevent pollution. Regulation 6 of R.704 of 4 June 1999 (Regulation 704) states that:

"*6.* ***Capacity requirement of clean and dirty water systems***

Every person in control of a mine or activity must

(d) design, construct, maintain and operate any dirty water system at the mine or activity so that it is not likely to spill into any clean water system more than once in 50 years."

Section 28(1) of NEMA contains a similar provision:

"28 ***Duty of care and remediation of environmental damage***

(1) Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring or, … to minimise and rectify such pollution or degradation of the environment."

In order to address the critical non-conformance identified during the audit, it was decided by the company that an environmental management co-operation agreement be entered into between the various parties utilizing the FRD. The agreement aimed to ensure that the non-conformance was addressed by regulating the respective parties' actions regarding the management of the FRD. The writer facilitated the project and is now reflecting on the successes and failures thereof.

1.2 Problem statement and research questions

Based on the above, **this research aimed to critically evaluate negotiated environmental agreements in South Africa**.

To achieve the aim of the study the following research objectives were formulated:

- To identify criteria for evaluating negotiated environmental agreements;

- To critically evaluate a negotiated environmental agreement in South Africa within its own regulatory regime.

A conceptual framework of this research study is depicted in Figure 4 below:

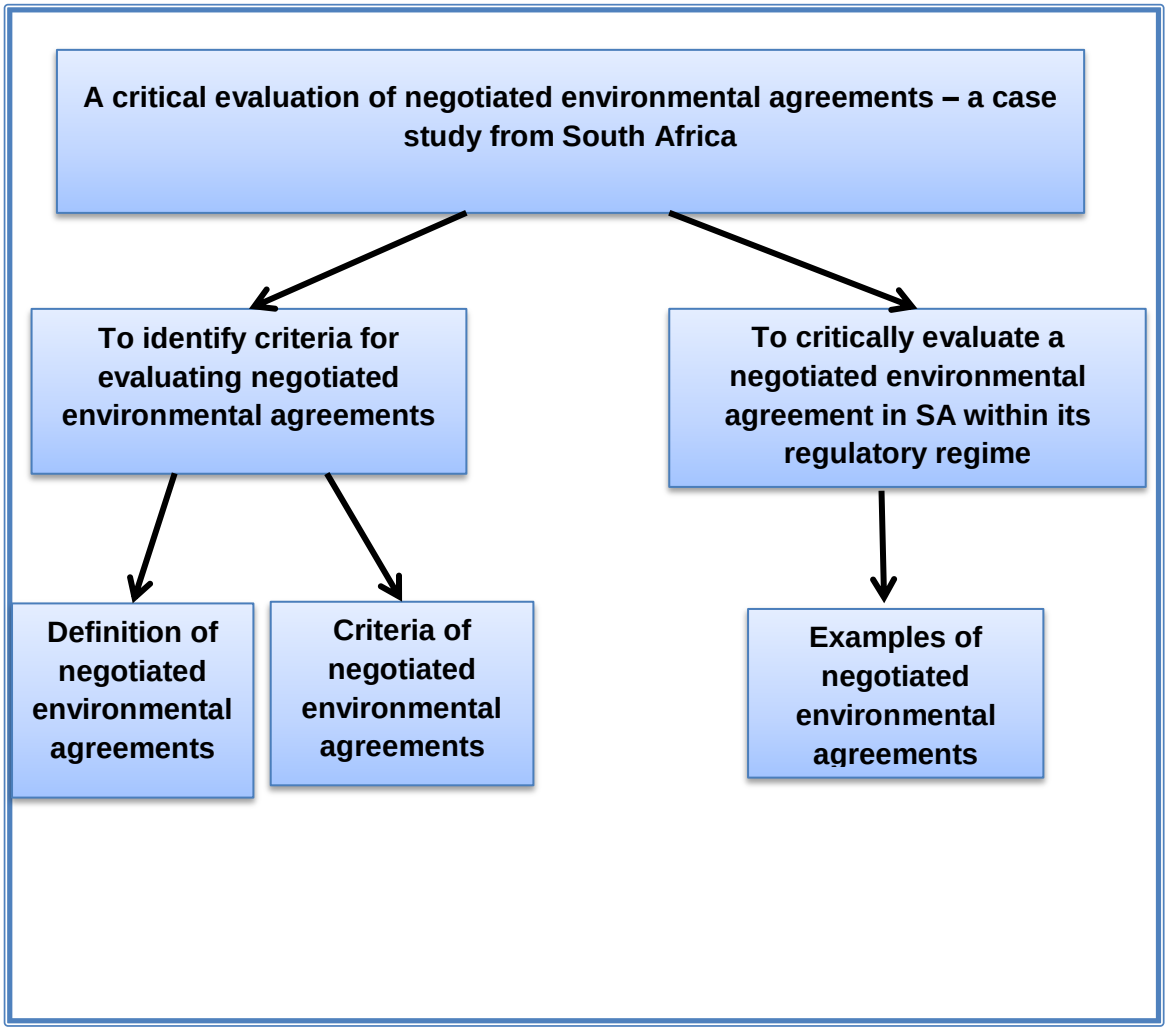

Figure 3: Conceptual framework of the research study (Adapted from Leedy & Ormrod, 2014:61)

1.3 Background to the case study

The facts of this specific case study will be described in this section and an attempt will be made to be open and forthcoming about the surrounding circumstances in order to demonstrate clearly what the obstacles and challenges were in concluding an agreement between the parties as well as the motivation, or lack thereof, in finalising and implementing it. The facts of this case study are as follows:

Mining Company B purchased part of the assets of Mining Company A in terms of a sale agreement concluded between the parties. Subsequent to the signature of the Agreement, both parties took the relevant steps to obtain consent in terms of section 11 of the MPRDA. Section 11 entails obtaining the written consent of the Minister for the transfer of the mining right from Company A to Company B. Both parties also proceeded with applications in terms of section 43(2) of the MPRDA to obtain consent for the transfer of the environmental liabilities associated with the transaction. Subject to the granting of the transfer of the mining right in accordance with section 11 of the MPRDA, further applications were made to the DMR by both parties respectively in terms of section 102 of the MPRDA for the following:

- Mining Company A applied for the amendment of its mining right to exclude the relevant areas pertaining to the sale agreement from its mining right and Environmental Management Programme (EMP);
- Mining Company B applied for the amendment of its mining right to incorporate the areas relevant to the sale agreement into its mining right and EMP (which included the FRD).

The parties undertook to cooperate with each other to procure the simultaneous approval of the DMR and/or Minister in respect of the respective section 102 applications.

The matter was complicated by the fact that Mining Company A had previously entered into an agreement with a small mining company (indicated in purple on Figure 5 below as the 'Contractor') in terms of which certain tailing mineral resources belonging to Mining Company A were sold to the small miners. In terms of the agreement between the small miners and Mining Company A, Mining Company A was obliged to make available, *inter alia*, a fines residue deposit facility to the small miners so that they could process the tailings mineral resources acquired from Mining Company A and deposit fine residues produced as a consequence of its processing on the fines residue facility, in this instance the FRD in question. The Sale of Assets agreement between Company A and Company B included an undertaking of Mining Company B to fulfil the obligations of Mining Company A in relation to the small miners, and therefore to allow them the use of the FRD for the deposit of fines material processed by them.

The facts of the matter consequently resulted in both parties using the FRD (Company A albeit indirectly). The accountability, maintenance and responsibility of the FRD was a delicate matter as Mining Company B was reliant on the return water from the FRD for its mining activities and should this not have been managed properly and the return water was not

adequate, it could have resulted in a huge loss of income for Mining Company B as the plant working the tailings would be unable to function.

In effect, Mining Company B would have preferred to take responsibility for the management of the FRD for this very reason, but as the transaction had not been completed in terms of legalities, Mining Company A was adamant that it should continue to be liable and responsible for the management of the facility. To this effect, Mining Company A had appointed a contractor to attend to the day-to-day management of the FRD. This contractor was remunerated by Company B.

This whole situation was brought about by the fact that the DMR had not issued an authorisation in terms of section 102 of the MPRDA. Section 102 states:

> *"A …. mining right, … mining work programme, environmental management programme, … may not be amended or varied … without the written consent of the Minister".*

Thus, the section 102 authorisation of the Mining Rights in terms of the MPRDA was still outstanding and, in the meantime, both the mining companies were utilising the FRD and the management thereof at the time had the potential to cause pollution by contravening R704 and allowing clean and dirty water systems to mix.

During an ISO 14001 certification audit of Mining Company B, a critical non-conformance to the ISO 14001 standard indicated the potential of significant pollution as the current situation in respect of the management of the FRD by both parties was not ideal. The non-conformance related to the disposal of slimes with the potential to have a significant impact of pollution on the environment and the legal position pertaining to the management of the FRD made the effective control and related management measures of activities and the facility itself nearly impossible in that an engineering company was doing regular inspections and reporting to Company A and the actual day-to-day dam management was done by the contractor who also communicated with Company A. Company B had been left out of the loop, as will be explained in the next paragraph.

Mining Company A engaged the services of a contractor to manage the FRD and although Mining Company B was liable for the remuneration of the contractor, the contractor reported to Mining Company A. Mining Company A believed that they remained technically and legally responsible and accountable for the liabilities associated with the FRD and therefore saw no need to liaise with Mining Company B on the contents of the reports from the contractor regarding the day-to-day management of the FRD. This constituted a non-compliance with

regards to process water management as Mining Company B had little or no authority on the use and management of the FRD and this culminated in a potential pollution risk. It was therefore deemed imperative to put measures in place in the form of an environmental management agreement to address the shortcomings of the management of the FRD between the two parties to prevent the potential risk of pollution.

The diagram in Figure 4 below indicates the major study components of the case study.

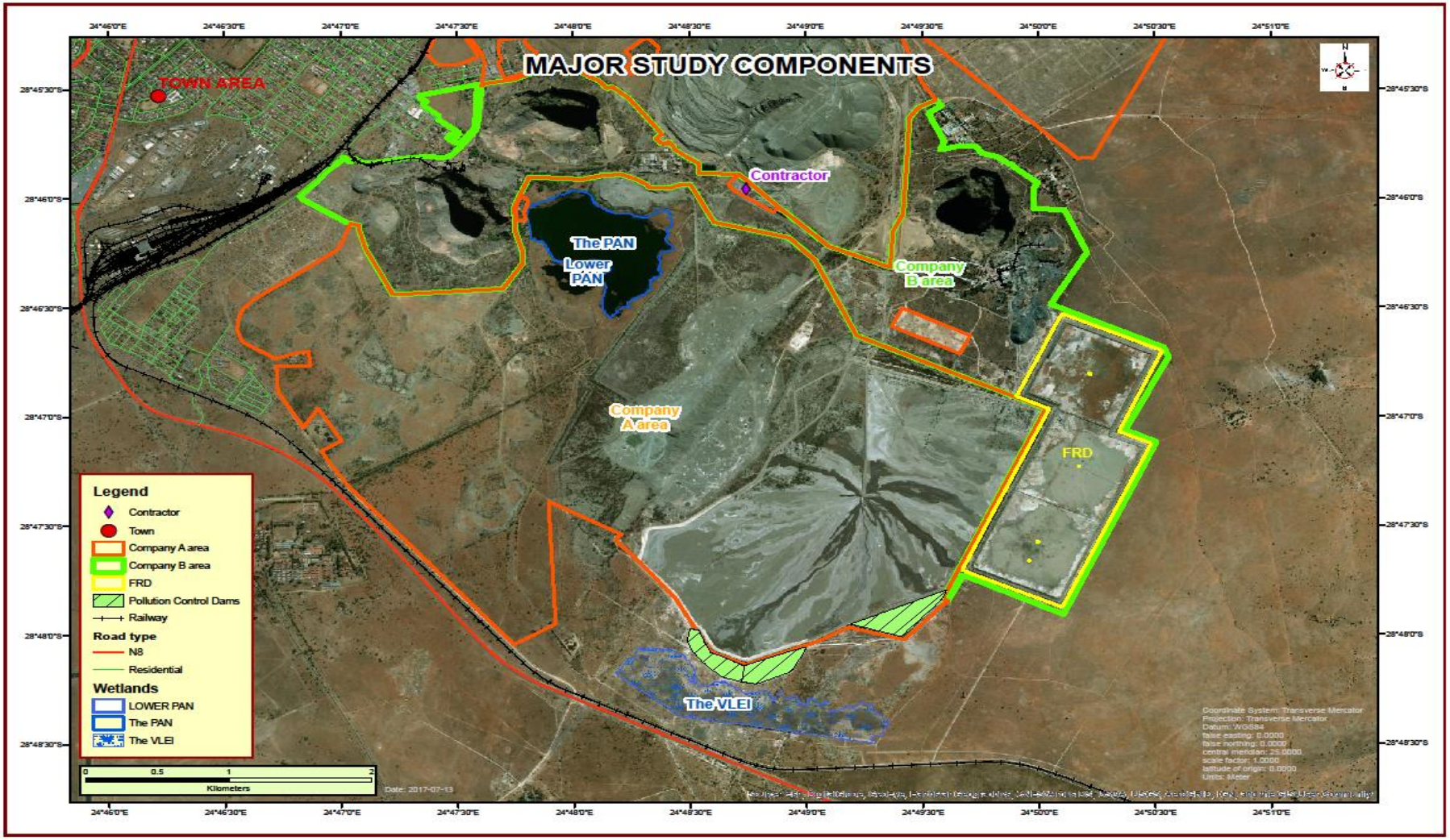

Figure 4: Description of major study components (Leo Consulting)

Water was drained from the FRD by means of a penstock system installed in the middle of the FRD. The volume of water that drained from the FRD was regulated by the increase or decrease respectively of concrete rings placed at the penstock. More rings resulted in less water draining and vice versa. The water drained from the FRD by means of the penstock was pumped to a storage dam for use in the plant. Excess water was accumulated in a pollution control dam to prevent it from flowing into the open veld area to the south of the FRD where there is a clean water system, for the purposes of this discussion referred to as 'the Vlei'. The potential for pollution of the clean water systems (the Pan and the Vlei) occur when there are excessive amounts of rain or when too many rings have been removed and the penstock drains water at a speed higher than is needed for use in the plant. The capacities of the pollution control dam and the water storage dam, respectively, are then exceeded with the contaminated water from these flowing into the Pan and the Vlei.

The operation of the penstock (the adding and removing of rings to regulate the drainage of the water) was conducted by the contractor appointed by Company A without consulting with Company B. This constituted a complete lack of communication between the two companies on the managing and operation of the FRD, hence the great risk of potential pollution and hence, further, the recommendation to put an EMCA in place.

At the time of the audit, water with a very high turbidity was observed flowing into the return water dam. Upon investigation, it was found that too many rings were removed at the FRD penstock to facilitate a higher return flow due to excessive water on the FRD. However, no authorisation from Company B was sought before this step was taken; in fact, Company B was not even informed about this. Water with excessive turbidity causes increased silting of canals and dams, reducing Company B's capability to deal with storm events, or to prevent water from flowing into the Vlei or the Pan. This necessitated the reactive creation and operation of several unlined temporary slimes paddocks, borrow pits etc., none of which were licensed in terms of the NWA and probably would have influenced the Integrated Water Use License Application (IWULA). The process water operation seemed to be mainly one of reactive crisis management. This issue resulted in a critical non-conformance since the confusing structure and responsibility regarding the process water infrastructure, identified a cardinal part of Company B's operation over which the company had little to no authority. The matter had been discussed in numerous meetings without arriving at a sustainable solution. A positive recommendation regarding certification will have been impossible, given the status of the current process water management system.

1.4 The Concept of FRD

1.4.1 Introduction to FRDs

As this case study revolves around the working of an FRD, it is important to understand how an FRD functions.

According to the Guideline for the compilation of a mandatory code of practice on mine residue deposits, “residual material from mining and associated beneficiation operations are commonly managed by deposition on surface” (Department of Mineral Resources, 2000:1). Often the residual material can be the cause of potential pollution either by wind or the migration of contaminants in the water. As further pointed out in this guideline, “unexpected flow failures of residue deposits on surface have in the past resulted in massive outflows of the stored material, causing loss of life, and damage to property, and/or environmental pollution”. There have been a number of noteworthy examples of residue deposit failures which have caused extensive damage to property and significant loss of life. The failure of the gold mine tailings dam at the Merriespruit section of Harmony Mine in 1994 springs to mind, a disaster during which 17 non-mining persons were killed and many more were left destitute and without refuge (Chamber of Mines, 2017).

As failures of FRDs around the world have been commonly attributed to inadequate management of those deposits, it was appropriate for the auditing company involved in this case study to identify the critical non-conformance regarding the management (or mismanagement) of the FRD in question during the legal compliance audit. The guideline sets out not only technical aspects regarding the management of an FRD, but also the management plan, which includes the definition of responsibilities, operating specifications, monitoring and auditing (Department of Mineral Resources, 2000:1).

1.4.2 Legal status of Guidelines and COPs

In accordance with section 9(2) of the Mine Health and Safety Act 29 of 1996 (MHSA), “an employer must prepare and implement a code of practice on any matter affecting the health or safety of employees and other persons who may be directly affected by activities at the mine if the Chief Inspector of Mines requires it”. The COP must be as per the guideline issued.

Although failure to comply with a COP does not constitute a breach of the MHSA in itself, it does not mean that such breach will not have ramifications. The MHSA specifies obligations on the employer (the owner of the mine) to ensure the health and safety of all employees and also persons who are not employees, but who may be directly affected by the activities at the

mine. The focus of the DME is to ensure that employers provide healthy and safe working environments at mines and not to enforce compliance with COPs. It does, however, focus on compliance with the MHSA and avoiding system failures, and therefore the mismanagement of the FRD by the relevant parties in this case study, makes this COP relevant to the discussion at hand. (Department of Mineral Resources, 2000:2).

This guideline defines an FRD (referred to as an "MRD" in the guideline) as: "Mine Residue Deposit, which is a dump, heap, pile, filling or tailings dam consisting of mine residue, which usually projects above the natural ground surface but may occupy the space of a pre-existing excavation" (Department of Mineral Resources, 2000:4). Regulation 73 under the MPRDA regulated the planning and management of residue stockpiles and residue deposits for mining. These have subsequently been replaced by regulations under the National Environmental Management: Waste Act 59 of 2008. Part of the requirements entail that the impacts of FRD practices be determined and managed. The design of an FRD is to be followed implicitly throughout the operation thereof. Any deviation from the design is to be approved by the delegated official within the Department responsible for mineral resources and the Environmental Management Programme is to be amended accordingly. A further requirement is that preventative or remedial action is taken in respect of any sign of pollution. The diagram in Figure 5 below illustrates how an FRD functions, so as to establish a better understanding thereof.

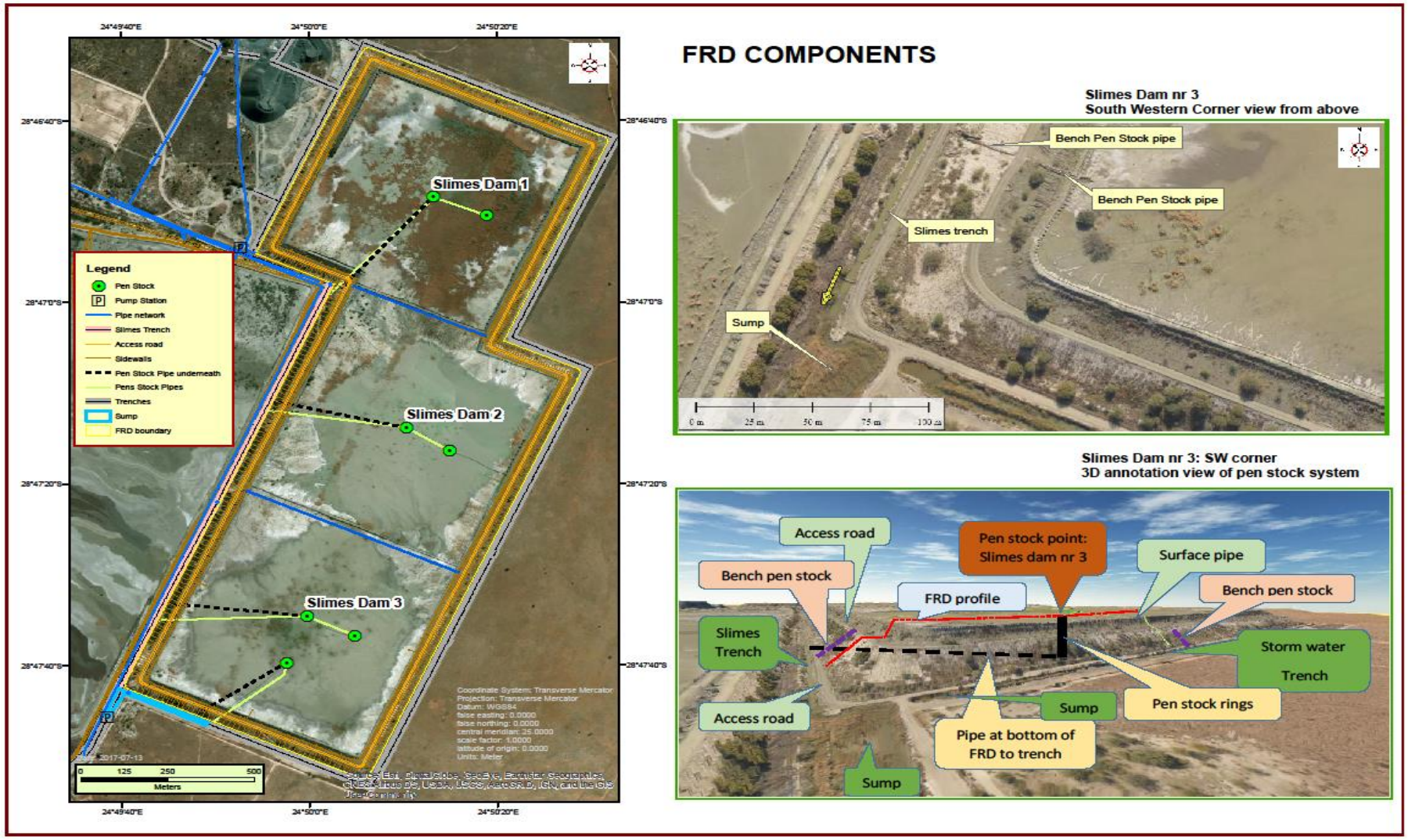

Figure 5: An illustration of how an FRD functions (Fraser, 2016) (Leo Consulting)

The FRD components:

- A storm water trench (or solution trench) which takes all supernatant water and rain water to a dedicated point from where it is pumped to the water storage facility.
- An access road, sloped inward, away from the trench.
- Bench penstocks on the benches which collect rain water and this is directed to the trench. (Note that the trenches are all sloped inward. This assists with wall stability.).
- A deposition pipe, also known as spigot pipe, which is situated on a small wall specially built for this purpose.
- A penstock which consists of concrete rings placed on top of each other as the FRD level rises.
- A pipe taking all supernatant water (there could be more than one penstock per FRD) to the solution trench.

1.4.3 Water-related network

There are a myriad of pipelines and other infrastructure related to the operation of an FRD. These are portrayed in Figure 6 below.

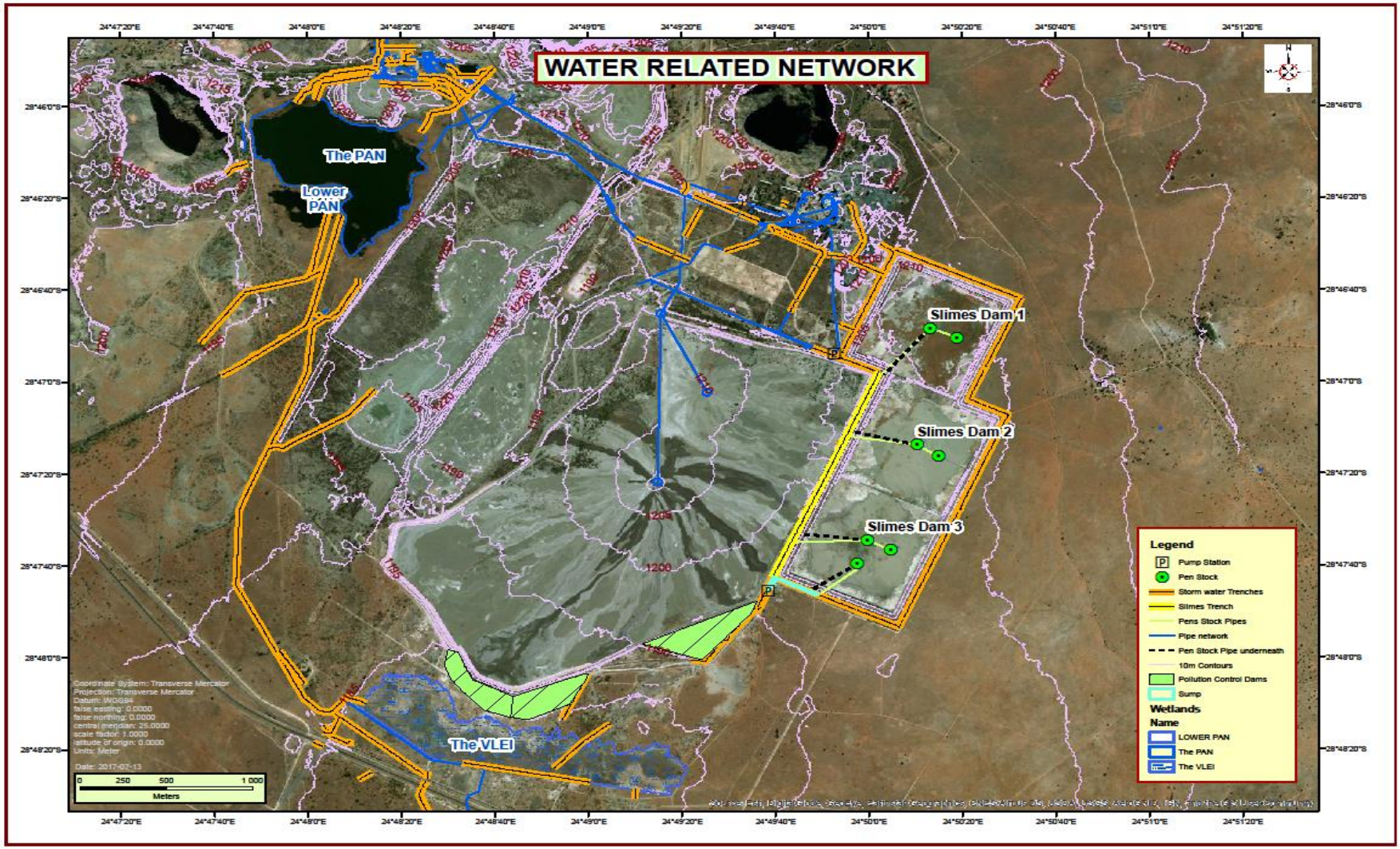

Figure 6: Water-related network (Fraser, 2016) (Leo Consulting)

The sections above explained the rationale of the study, the aim of the study, the complexity of the applicable legislation and the various environmental management instruments. The next section will explain the methodology which was followed in this study.

CHAPTER 2

RESEARCH METHODOLOGY

2.1 Introduction

According to Collis and Hussey (2003: 55) "[m]ethodology denotes the general viewpoint and manner in which the research procedure was carried out and dissects the reasoning around obtaining and analysis of such information." Methodology also "considers and explains the logic behind research methods and techniques" (Welman *et al*., 2012:2). The methodology applied to the research study is set out in this Chapter 2.

The study is based on a pragmatic approach with emphasis on the research problem, namely to critically evaluate the successes of negotiated environmental agreements within a complex regulatory regime. It is a real-world scenario to be evaluated.

It is a qualitative study, as opposed to a quantitative study, and therefore it resulted in the research taking on a phenomenological approach. Positivists (quantitative researchers) and anti-positivists (qualitative researchers) interpret the researchers' roles differently. While a positivist researcher doing a quantitative study tries to remove and withdraw himself "as far as possible from the research situation to avoid being biased, the anti-positivist researcher becomes absorbed in the research situation" (Welman *et al.*, 2005:191). "The word phenomena refers to an individualistic, subjective approach to defining what reality is". (Stone, 1975:63). The author of this study was involved in the research situation from the outset and hence the phenomenological approach was followed.

The aim of the research in terms of the phenomenological approach is that the researcher endeavours to understand the case study from the various perspectives and understanding of the individuals concerned. Therefore, the evaluation of the success of negotiated environmental agreements within a complex regulatory regime will not focus as much on the case study itself, but rather on how it was experienced by the individuals who were involved in the process, including the researcher.

Furthermore, this will be a deductive research study as certain conceptual and theoretical structures were developed, for example, a negotiated environmental agreement was drafted and an attempt was made to implement it and in this study it will be tested "…by empirical observation; thus, particular instances are deduced from general inferences" (Collis & Hussey, 2014:7). The methodology (paradigm, design and methods) applied to this research study is illustrated in Figure 7 and then further explained.

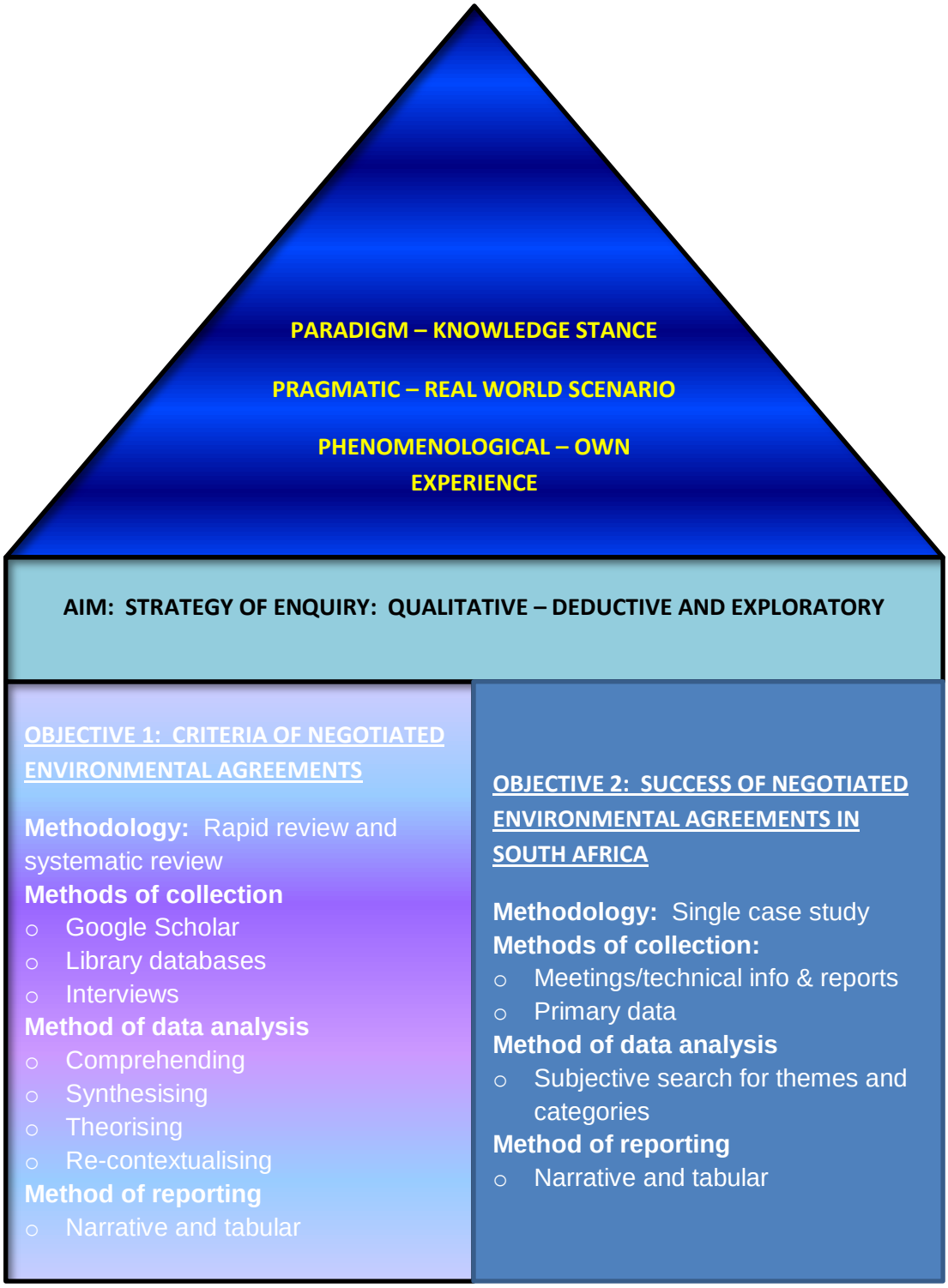

Figure 7: Illustration of methodology

According to Leedy and Ormrod (2014:2), “Research is a systematic process of collecting, analysing, and interpreting information – data - in order to increase our understanding of a phenomenon about which we are interested or concerned”. To this effect, and as illustrated in Figure 7, data was collected by means of meetings, interviews, correspondence and the use of electronic databases and other library resources.

It is important to differentiate between tools of research and research methodology. Tools of research include the library and its resources, computer technology and the human mind. Research methodology “is the general approach the researcher takes in carrying out the research project; to some extent, this approach dictates the particular tools the researcher selects” (Leedy & Ormrod, 2014:7).

Professions dealing with the FRD and which were included in this research include the legal profession, environmental practitioners, mining engineers, mine managers, contractors, the business and financial profession and the systems audit profession.

2.2 Research paradigm

“The starting point in research design is to determine your research paradigm.” (Collis & Hussey, 2014:10) According to Welman *et al.,* the research paradigm entails the general approach to the research (2005:13). A further definition of the term “research” is “the systematic investigation towards increasing the sum of knowledge” (Chambers Concise 20th Century Dictionary, 1985:845) and “the systematic investigation to establish facts or collect information on a subject” (Class presentation: Research Design and Data Collection Methods” thinking, researching, talking, Angus Morrison-Saunders 26 July 2014). Research is also defined by Welman *et al.* as “a process that involves obtaining scientific knowledge by means of various objective methods and procedure” (2012:2). To this effect, the research paradigm and framework that guides the research on this particular topic is from a knowledge stance as the author of this study was involved in the process of obtaining knowledge by using the methods described above and below.

The research paradigm is closely linked to the research design, which refers to the choices made in terms of the methodology and methods used to address the research questions. (Collis & Hussey, 2014:59).

2.3 Research design

Leedy and Ormrod refer to research design as “a general strategy for solving a research problem” (2014:76). It entails an explanation of the procedures followed while doing the

research, which include the data collected and the analyses thereof. It boils down to the planning of the research (Leedy & Ormrod, 2014:78).

Research designs can be either qualitative, quantitative or a mixed method design. The researcher used a qualitative design, as set out in clause 2.3.1 below.

2.3.1 Qualitative design

According to Welman *et al.*, "the aims of qualitative research methods are to establish the socially constructed nature of reality, to stress the relationship of the researcher and the object of study, as well as to emphasise the value-laden nature of the enquiry" (2005:8).

In this research study, the case study pertaining to the critical evaluation of the successes of negotiated environmental agreements, is a qualitative design as it is the preferred study for answering questions of "how" and "why". The author, as the investigator, had little control over the event. The focus is on a contemporary real-life event (Yin, 2009:4). According to Welman *et al*., (2005:23) "the purpose of exploratory research is to determine whether or not a phenomenon exists, and to gain familiarity with such a phenomenon, not to compare it with other phenomena".

One of the strengths of qualitative data is that "they focus on naturally occurring, ordinary events in natural settings, so that we have a strong handle on what "real life" is like (Miles *et al.*, 2014:11). The emphasis is specifically on the case study at hand "a focused and bounded phenomenon embedded in its context" (Miles *et al*., 2014:11).

According to Collis and Hussey (2014:130) there are some issues in collecting qualitative data, as qualitative data "are normally transient, understood only within context and are associated with an interpretivist methodology that usually results in findings with a high degree of validity". This is in contrast to quantitative data, "which are normally precise, can be captured at various points in time and in different contexts, and are associated with a positivist methodology that usually results in findings with a high degree of reliability." (Collis & Hussey, 2014:130).

2.4 Research strategies

In the process of evaluating the successes of negotiated environmental agreements within a complex regulatory regime, a qualitative research approach in the form of a deductive single case study was used. Figure 8 below indicates the deductive, empirical cycle in the scientific expansion of knowledge.

According to Leedy and Ormrod (2014:17), "[d]eductive logic begins with one or more premises. These *premises* are statements or assumptions that the researcher initially takes to be true. Reasoning then proceeds logically from these premises toward conclusions that – if the premises are indeed true – must *also* be true."

In this qualitative study, the interpretation of the data will inevitably be influenced by the researcher's biases and values and experiences of the phenomena. (Leedy & Ormrod, 2014:161). As it is a qualitative study the data analysis is more subjective in nature (Leedy & Ormrod, 2014:99).

The researcher adopted a deductive approach in the form of narrative text combined with the data obtained from the interviews.

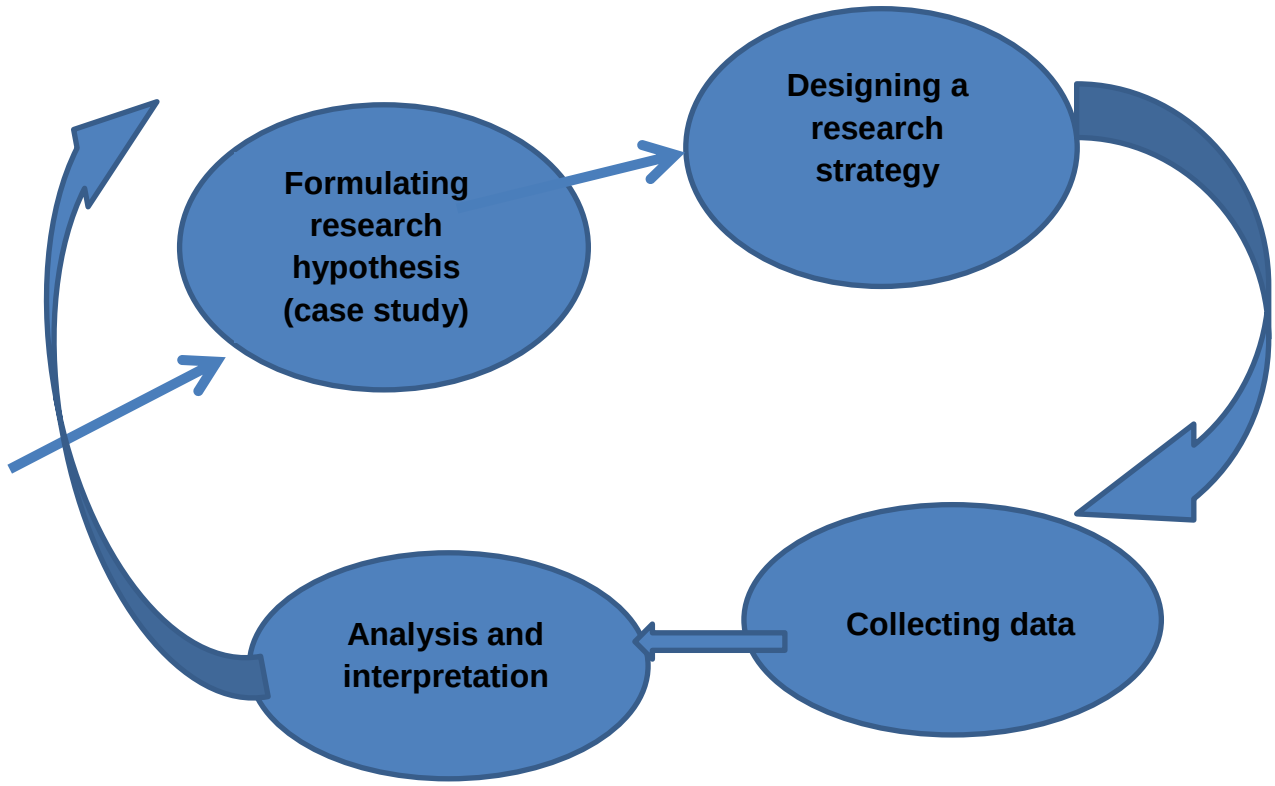

Figure 8: Adapted from the deductive, empirical cycle in the scientific expansion of knowledge (Welman *et al.*, 2005:12)

From Figure 8 above, it is clear that once a research hypothesis (or in this instance a case study) has been identified, a research strategy needs to be designed. Relevant data must also be collected, analysed and interpreted (Welman *et al.*, 2005:12).

According to Yin (2014:15), a case study "…tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result". "The term case study in effect means that a unit of analysis is studied intensively" (Welman *et al*., 2005:193).

The flow chart below in Figure 9 indicates the process followed during case study research. According to Bhattacherjee (2012:40), the strength of a case study "…is its ability to discover a wide variety of social, cultural, and political factors potentially related to the phenomenon of interest that many not be known in advance".

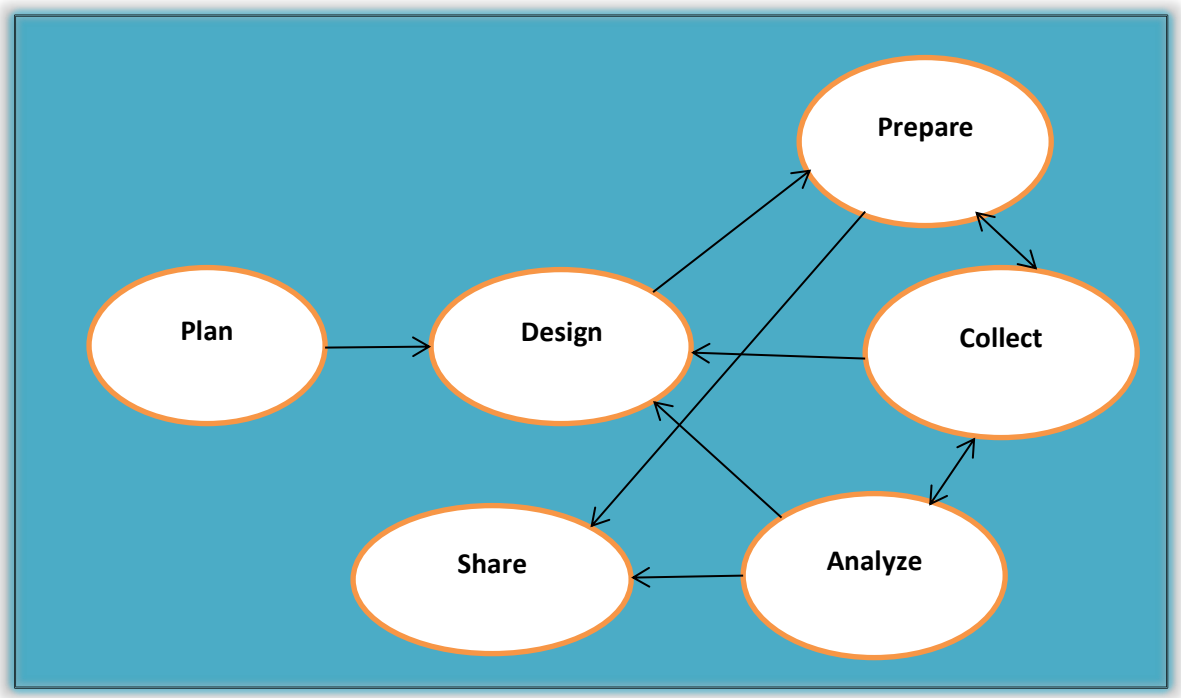

Figure 9: Doing case study research: A linear but iterative process (Yin, 2014:1)

2.5 Data collection methods, analyses and reporting

According to Collis and Hussy (2014:59), "A method is a technique for collecting and/or analysing data".

As stated in Figure 7 on page 25 summarising the methodology to be followed in this research, two objectives had to be achieved. The respective research strategies of the objectives are discussed below.

2.5.1 Objective 1: Criteria of successful negotiated environmental agreements

Methodology

“A literature search is a systematic process with a view to identifying the existing body of knowledge on a particular topic. The literature is all sources of published data on a particular topic” (Collis & Hussey, 2014:76).

For this research, the review consisted of a **rapid review** and a **systematic review**. A rapid review entails an assessment of what is already known. In this instance, the existing criteria of successful negotiated environmental agreements were reviewed systematically to critically evaluate existing research (Grant & Booth, 2009:95). Basically, the researcher conducted a “review of reviews” (Grant & Booth, 2009:100).

With the systematic review, the researcher systematically searched for evidence, appraised it and then put it together or synthesised it (Grant & Booth, 2009:95). An advantage of using the systematic review is that it exposes all known knowledge on the specific topic of the case study in question (Grant & Booth, 2009:102).

Methods of collection

The researcher made use of technology in the form of library databases and Google Scholar to search for relevant literature regarding negotiated environmental agreements. The researcher’s personal observations during the period of the case study also served as a data collection method. There is not much literature available on the topic, but the research outcomes from these sources were synthesised and integrated to indicate criteria and other pertinent facts regarding successful negotiated environmental agreements (Randolph, 2009:10).

Data analysis

The synthesis of valid and relevant literature was done in a typically narrative and tabular form and analysed by sorting through the quantities of literature to ascertain the general quality and direction of the effect of the literature. It was then categorised into what was known and what remained unknown and the uncertainty around findings and recommendations for future research (Grant & Booth, 2009:95).

Analysing qualitative data presents some challenges, one of which is that “there is ‘no clear and universally accepted set of conventions for analysis corresponding to those observed with quantitative data” (Collis & Hussey, 2014:154).

According to Morse (cited by Collis & Hussey, 2014:155) all the different approaches to analysing qualitative data are based on four key elements, which vary according to the methodology used:

- Comprehending: Ensuring that one understands the topic before commencing with the research;
- Synthesising: Pulling together all the different issues and concepts of the research and re-organising them into a different explanation of what the research is all about;
- Theorising: Manipulating the available data into different theories until the qualitative data has some structure and until the best theory is developed;
- Re-contextualising: Generalising the data so that it can be applied to other settings.

(Collis & Hussey, 2014:155).

Reporting

The method of reporting was narrative and with some tabular accompaniment. The reporting:

- showed how approaches to negotiated environmental agreements have changed over time;
- compared and contrasted varying theoretical perspectives on negotiated environmental agreements;
- described general trends in research findings;
- identified discrepant or contradictory findings, and suggested possible explanations for such discrepancies as far as negotiated environmental agreements or the criteria for negotiated environmental agreements were concerned; and
- identified general themes that could be traced through the literature.

2.5.2 Objective 2: Success of negotiated environmental agreements in South Africa – a single case study

Methodology

As described by Bhattacherjee (2012:40) "[c]ase research is an in-depth investigation of a problem in one or more real-life settings (case sites) over an extended period of time". Yin (2014:16) in turn defines a case study as "an empirical inquiry that investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident".

Based on the definition by Yin, the case study research was undertaken because the researcher wanted to understand a real-world case; in this instance to critically evaluate the successes of negotiated environmental agreements within a complex regulatory regime (Yin, 2014:16).

Method of collection

According to Bhattacherjee (2012:40), data may be collected in a case study by using "a combination of interviews, personal observations, and internal or external documents". The research was conducted by the researcher as part of a real-life situation and therefore the researcher was instrumental in gathering data by conducting interviews with individuals who had been involved in the process and convening meetings for discussions relevant to the case study. Collis and Hussey (2014:133), suggest that the advantage of interviews is that the interaction with the interviewee clarifies ambiguities in questions and one can follow up on answers from interviewees if further information is required.

Minutes of meetings and various other internal documents, including drawings, technical reports and maps, were also used to collect data. Leedy and Ormrod refer to interviews and documents as "verbal data" and to drawings as "nonverbal data" (2014:99).

Welman *et al*. (2005:25) furthermore argue that interviews can be structured, unstructured or semi-structured.

With reference to interviews, four ethical considerations had to be borne in mind by the researcher (Welman *et al.*, 2005:201):

1. Informed consent: Permission had to be obtained from the relevant interviewees for the case study and they had to be briefed about the purpose of the interview;
2. Right to privacy: The interviewees had to be assured of their right of privacy and anonymity;
3. Protection from harm: The interviewees had to be indemnified against any harm;
4. Involvement of the researcher: The researcher had to guard against manipulating the interviewees.

Evidence for this case study was also sourced through participant observation as the researcher was actively involved in the study (Yin, 2014:78). The researcher spent extended periods of time on site and interacted regularly with persons who were interviewed in an attempt to draft and implement the agreement. The researcher had worked in the corporate world and mining industry for a number of years and could therefore also record the social factors which had bearing on the case study.

Data analysis

According to Leedy and Ormrod (2014:143-144), data analysis in a case study involves the following steps:

- Organisation of details about the case: The various facts of the case study had to be arranged in some form of order.
- Categorization of data: Certain categories of data were identified, such as the criteria required for successful environmental management agreements in South Africa.
- Interpretation of single instances: Specific technical reports, occurrences (like environmental incidents) and other data were examined to ascertain relevance to this specific research.
- Identification of patterns: All data and its interpretations were examined to identify underlying patterns relating to the current case study.
- Synthesis and generalisations: An overall picture of the case study was established and conclusions were reached by conducting a critical evaluation of the voluntary agreement of this case study against the criteria identified.

Reporting

In writing the research report, both the reason for conducting the research and the facts of the case study were described. A description of the data collected and of the patterns found was shown.

The next section discusses the literature found in respect of the criteria and successes of negotiated environmental agreements and how this interfaced with the study.

CHAPTER 3

LITERATURE REVIEW

3.1 Introduction

In this chapter, voluntary negotiated agreements are discussed in the global sense subsequently also in the South African context. Voluntary negotiated agreements within the South African regime are investigated as well as the criteria for a successful voluntary agreement in the context of the case study at hand.

In order to understand where negotiated environmental agreements - and more specifically the present case study - fit into the realm of our environmental legislation, one needs to have an understanding of the various tools available in terms of environmental management.

Compliance and enforcement mechanisms generally encompass two categories, namely 'command and control' and 'alternative' mechanisms (Craigie, *et al.*, 2010:51). The focus of this research is on one of the 'alternative' mechanisms and therefore the 'compliance and control' measure will not be discussed. Craigie *et al.* (2010:58) suggest that alternative compliance and enforcement measures can be divided as follows:

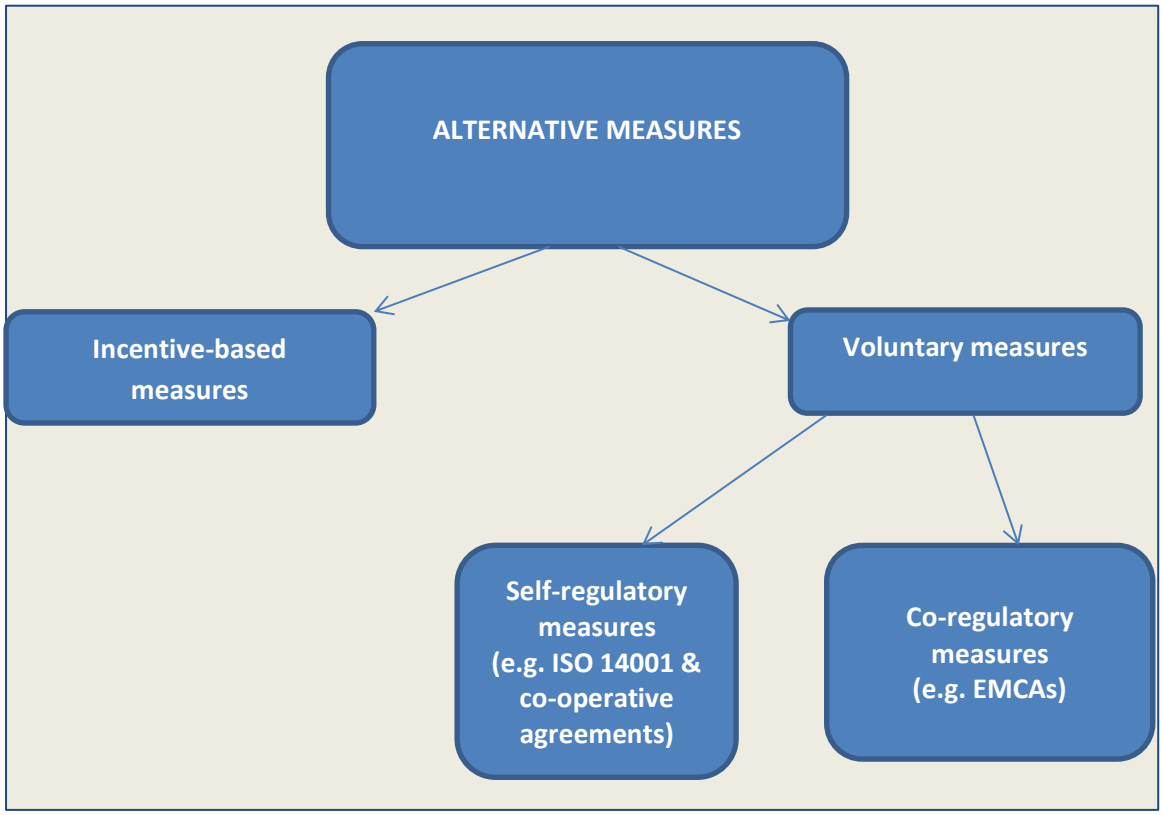

Figure 10: An illustration of where self-regulatory and co-regulatory measures fit into voluntary measures (adapted from Craigie *et al.*, 2010:60)

According to Lehmann (2010:269), "voluntary approaches are supplementary forms of environmental management" and "…are most effective within an enabling regulatory environment". This is, of course, true and it is obvious that voluntary approaches would not be an effective tool without the command-and-control tool to fall back on in the event of mismanagement or failure. Financial incentives can of course also play a role.

Voluntary agreements and regulatory strategies may be, and often are, complementary strategies. Voluntary programmes do not eliminate the need to consider regulatory strategies. Even with regulatory strategies in place voluntary agreements can encourage participants to go beyond regulatory requirements or to reduce regulatory cost burdens. Voluntary agreements often incorporate some regulatory mechanisms (OECD, 1997:12-13).

Lehmann (2010:274) further distinguishes between four different types of voluntary compliance measures, as illustrated below.

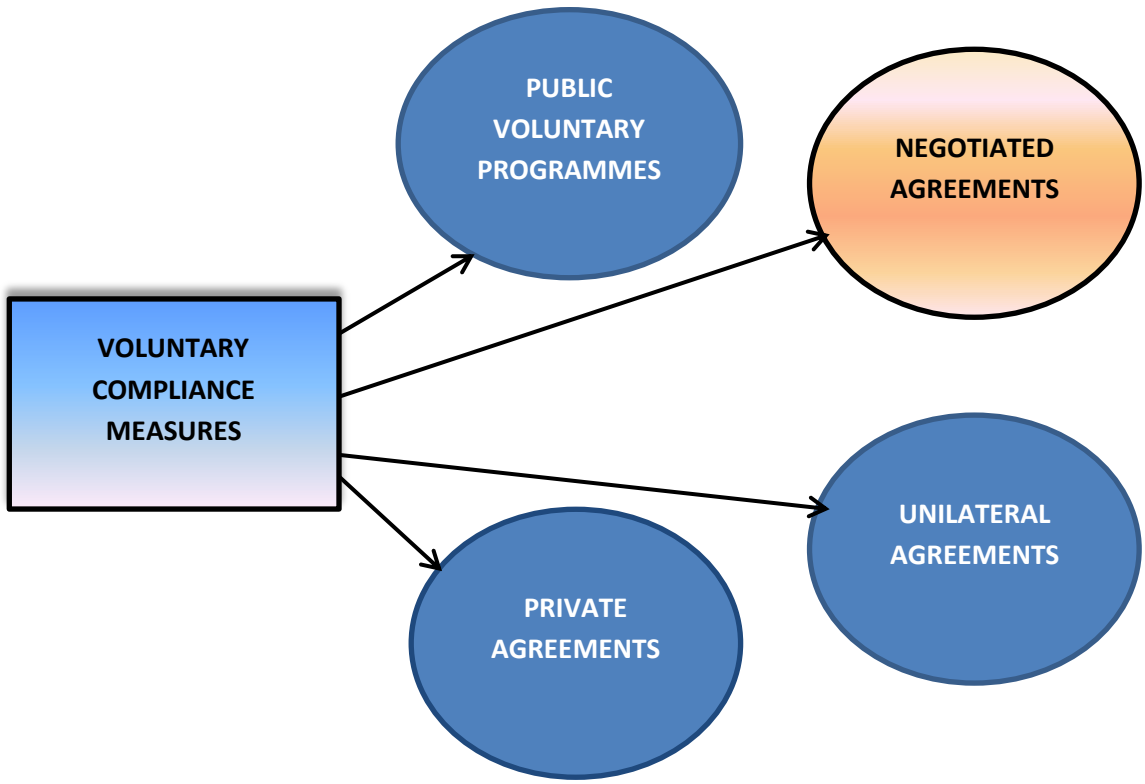

Figure 11: Types of voluntary compliance measures (adapted from Lehmann, 2010:274)

Lehmann (2010:274) classifies the different types of voluntary compliance measures as indicated in Figure 11 by the **parties** involved in the establishment and implementation of the

tool rather than the actual **process** involved. The agreement pertaining to this case study leads us to focus on negotiated agreements, as indicated in orange in Figure 11.

3.2 Negotiated agreements

Negotiated agreements, also referred to as 'co-regulatory instruments' "are essentially contracts that have been entered into between the regulator and an enterprise of industry" (Lehmann, 2010:283). It appears that negotiated agreements have been implemented with success in some countries whilst it has not been used as much in other countries and Lehmann's explanation for this is that it depends on the "institutional" arrangements within those countries, including relationships of mutual trust, or lack thereof, between government and industry (Lehmann, 2010:283). As mentioned elsewhere in this document, South Africa has embraced the use of negotiated agreements as an environmental tool by means of section 35 of NEMA. The latter regulates EMCAs between different organs of state, organs of state and private bodies, or between private bodies respectively (as is the case with the case study at hand). For the purposes of this working paper, an environmental voluntary agreement is defined as follows:

> *An agreement between two parties to facilitate voluntary action with a desirable environmental and social outcome, which is encouraged by the government, to be undertaken by the participant based on the participant's self-interest* (Adapted from OECD, 1997:12).

Voluntary agreements aim to encourage industries to set and meet environmental goals, while giving them the flexibility to achieve these goals in the manner which best meets their circumstances. Voluntary agreements also help to raise the profile of environmental issues in corporate decision-making (OECD, 1997:6). The author considered this as a major positive contribution of voluntary agreements to environmental management in the mining industry. Having been involved in legal compliance in the mining industry for 20 years, her experience was that environmental issues had always received less attention in the corporate world than other issues such as health and safety.

Lehmann (2010:285) argues in favour of co-regulation in that it "provides a stimulus for industrial innovation, in contrast to directive-based regulation, which is thought to stifle innovation". It is often the case that over-reliance on regulation inhibits communications between government and industry in an attempt by government to over-regulate, especially in developing countries.

Voluntary agreements can be differentiated by various key characteristics which lead to the identification of four major types of voluntary agreement policies:

1) **Target-based:** Negotiated targets that may be legally binding.
2) **Performance-based:** Performance goals which have been negotiated but are not legally binding.
3) **Co-operative research and development:** this focuses on new technology.
4) **Monitoring and reporting:** This can constitute a voluntary agreement on its own but forms part of most voluntary agreements.

As is the case in this study, voluntary agreements often display more than one of the characteristics mentioned above (OECD, 1997:7).

3.3 Negotiated agreements globally

In some European countries, such as Germany, compliance is encouraged by entering into negotiated agreements with industry with the premise that in the event of non-compliance regulation will be introduced. In France, standards and processes are included in negotiated agreements to test them for future legislation (Lehmann, 2010:286).

In the United States, negotiated agreements are used to improve "the effectiveness and efficiency of laws by providing relief to regulated industry" (OECD, 1998:6). This implies that voluntary agreements are used in situations where legislation is lacking relating to water, air, waste and other environmental matters, and negotiated agreements are used to improve the effectiveness of laws by providing relief to regulated industry (OECD, 1998:6).

Negotiated agreements are used more frequently to improve reductions in greenhouse gas emissions and energy efficiency (OECD, 1997:6).

In Canada, the Canadian Automotive Workers Union negotiated cleaner production provisions into collective agreements with the motor industry involving 50,000 workers in 30 plants, as well as suppliers and part manufacturers (Gunningham & Sinclair, 2002:3).

3.4 Negotiated agreements in South Africa

Despite the legal mandate since 1998 in NEMA for the use of negotiated agreements, very few negotiated agreements have been concluded and implemented in South Africa. Lehmann

(2010:287-288) alludes to the fact that the Department of Minerals and Energy entered into an energy reduction accord with 43 organisations in 2005, some of which were individual firms and some industry associations, with the goal of achieving a 12% reduction in energy consumption by 2015. This energy reduction accord did not specify specific targets or standards but merely a commitment from all parties that they would develop strategies and targets, as well as reporting and auditing mechanisms for their specific industries.

Examples of cooperative agreements in South Africa are:

The Atmospheric Pollution Prevention Act (APPA) 45 of 1965 was converted into the National Environment Management: Air Quality Act (NEMAQA) 39 of 2004. Government identified sectorally the ten most polluting air quality areas regarding toxicity and levels of pollutants. It gave industry the opportunity to come up with self-imposed standards and industry drafted much stricter standards than the government would have done.

Environmental Management Cooperative Agreements (EMCAs) are conceived of as a type of administrative agreement between the authorities and "any other person – or community" for the purpose of compliance with NEMA and may contain:

(a) an undertaking by the person or community concerned to improve on the standards laid down by law for the protection of the environment which are applicable to the subject matter of the agreement;

(b) a set of measurable targets for fulfilling the undertaking in (a), including dates for the achievement of such targets; and

(c) provision for -

  (i) periodic monitoring and reporting of performance against targets;

  (ii) independent verification of reports;

  (iii) regular independent monitoring and inspections; and

  (iv) verifiable indicators of compliance with any targets, norms and standards laid down in the agreement as well as any obligations laid down by law;

(d) the measures to be taken in the event of non-compliance with commitments in the agreement, including (where appropriate) penalties for non-compliance and the provision of incentives to the person or community.

The first true EMCA in South Africa was driven by the then Minister of Environmental Affairs and Tourism, Marthinus van Schalkwyk, with regard to off-road vehicle regulations. He asked

the off-road community in 2005 to submit proposals to ensure that the environment would be protected from irresponsible people. The National Off-Road Sector in South Africa in March 2008 devised self-regulation with the "Strategy and Implementation Framework towards Co-regulation of the National Off-Road Sector in SA" in conjunction with the Department of Environmental Affairs. It proposed the training of all off-road drivers, the accreditation of the trails and also the concept that certain environmental sensitive areas would be off limits (www.info.gov.za/speeches/2009/09031812151001.html).

The principle of including standards and processes in negotiated agreements to test them for future legislation was also applied in South Africa with the Memorandum of Agreement entered into between the Department of Environmental Affairs (DEAT) and Organised Labour and Organised Business regarding the re-use and recycling of plastic bags, which came into effect on 9 May 2003. The objective of the agreement (and ultimately of the legislation to be promulgated in the wake thereof), was to reduce plastic bag use in South Africa by 50% and thereby reduce the negative impacts of plastic carrier bags on the environment. This process was not a success due to reasons which fall outside the ambit of this study and will therefore not be elaborated upon (Dikgang *et al.*, 2010:2).

3.5 The case study

The matter that triggered the drafting of the negotiated agreement which is the subject of this study was a non-conformance identified during an ISO 14001 legal compliance audit. Although the scenario was described earlier in this paper, it is summarised below for ease of reference:

> *During the ISO 14401 legal compliance audit, evidence was found that Company B was using the FRD for the disposal of slimes whilst the purchase of the FRD and subsequent transfer of liabilities of the facility from Company A to Company B had not been finalised and the relevant Mining Right had not been obtained. An engineering firm had been appointed by Company, A to conduct inspections and report to Company A and the actual day-to-day management of the FRD was done by a different contractor. The fact that Company B paid a contractor to manage the FRD, but that the contractor for all practical purposes reported to Company A, was the direct cause of regular non-compliances with regard to process water management. At the time of the audit, water with a very high turbidity was observed flowing into the return water dam.*

> *Upon investigation, it was found that too many rings had been removed at the FRD penstock so as to facilitate a higher return flow due to excessive water on the dam. The problem is that Company B was not informed about this. Water with excessive turbidity causes increased silting of canals and dams, reducing Company B's capability to deal with storm events, or to prevent water from flowing into the Vlei or the Pan. This was a direct contravention of not only section 2 of NEMA regarding the prevention of pollution but also of R704 regarding the separation of clean and dirty water systems. The process water operation seemed to be mainly one of reactive crises management. This issue has been discussed in numerous meetings without arriving at a sustainable solution.* (Legal compliance audit report of 25-26 February 2013).

In order to resolve the matter and thereby clear the non-conformance, it was recommended that an agreement be negotiated between Company A and Company B regarding the management of the FRD. Subsequently, meetings were set up between representatives of the two companies for discussions on the way forward.

One of the major obstacles appeared to be an academic one as, despite the fact that a sale agreement had been concluded between the parties for the sale of the mining right and associated assets/infrastructure, the Manager of Company A was still carrying a legal appointment in terms of section 3(1)(a) of the Mine Health and Safety Act 29 of 0996. Section 3(1)(a) states: **"**The employer of every mine that is being worked must appoint one or more managers with the qualifications as may be prescribed to be responsible for the day-to-day management and operation of the mine, and if more than one manager is appointed, ensure that the managers' functions do not overlap".

However, the manager of Company B had obtained consent from the DMR to have a similar appointment for his position. As a result of the accountability and responsibility attached to these appointments, neither of the parties involved were willing to relinquish their management of the FRD respectively, hence the confusion regarding the day-to-day management thereof resulting in crises management, as described by the legal auditor in the audit report mentioned above.

There are a number of advantages and disadvantages to co-regulation over pure directive-based regulation. According to Lehmann (2010:284), the main advantages of co-regulation is the fact that it is based on "consensual decision-making and a co-operative approach to the solution of environmental problems". This was not quite the case with the present case study as Company A was rather reluctant to negotiate the terms of the agreement because there was no impact on them financially or environmentally. In contrast to this, Company B was

impacted upon financially and environmentally: Financially, as Company B was reliant on the return water of the FRD for the operation of their plant and would suffer great losses for any periods that the plant would not be operational due to lack of water; and environmentally as there was the potential for pollution of the Pan and thereby a contravention of the NWA in terms of pollution (and possibly a further pollution of the Vlei as a wetland if the Pan overflows and the water runs into the Vlei); and of Regulation 704 in terms of the non-separation of clean and dirty water systems (Le Roux, 2016).

Two other factors bear mentioning regarding potential pollution of the Pan:

- Municipal stormwater ran directly into the Pan.
- A sewerage pump station was operated by the Municipality and was managed badly often resulting in raw sewerage running into the Pan.

These two factors justifiably led to the management of Company B questioning the need for putting measures in place to combat pollution if the source to be protected by the measures (i.e. the agreement between the parties), was already polluted (and ironically had been declared a 'clean water system' in terms of Regulation 704). It seemed pointless if the Municipality was not implementing measures from their side to combat pollution of the Pan (and ultimately the Vlei) by ensuring that their pump stations at the sewerage works were in working order. A further consideration was that the Pan was virtually surrounded by old FRDs from historical mining in the area and there was a trench which ran into the Pan from an old tailings dump from historical mining in the area. Therefore, Company B was not the only party involved in potential pollution of the Pan and ultimately the Vlei (Le Roux, 2016). This diminished the enthusiasm of Company B to further the negotiating of the agreement, but as a result of the non-conformance identified during the legal compliance audit, they did not have much of a choice.

This links to a further statement made by Lehmann (2010:283) namely that negotiated agreements encourage innovation in a country where, due to our political history, there has always been poverty alleviation on the one hand and environmental protection on the other, and for both of these to be achieved (and thus achieving development), it is imperative that government and industry work towards the same goals. 'Negotiated agreements' is a tool to provide co-operation between government and industry.

3.6 Criteria for successful negotiated environmental agreements

This section sets out the criteria which have been identified for the successful conclusion of a negotiated agreement.

Legal and policy framework

As stated by Fischer (2005:30), it is a key requirement for any successful EMCA that there should be a supportive legal and policy framework. This will place the sanction there in the event of non-compliance and should be complementary to the command-and-control measures already in place.

Mutual trust between parties

Based on the author's experience during the various meetings held between the parties of this case study, a lack of mutual trust was a factor deterring both parties from committing to the provisions of the environmental management contract which was drafted regarding the management of the FRD. There was obvious tension and a lack of trust regarding management issues of the FRD with both parties being reluctant to relinquish their duties or being transparent to the other. This resulted therein that the contract was never concluded between the parties.

A clear desire by both parties to reach a mutually satisfactory agreement

This desire goes hand in hand with the previous heading related to trust between the parties. As stated in the Guide for the design and use of EMCAs (DEAT, 2000:18), the parties must be willing to "forego traditional and historical paradigms or "baggage" and move forward to agreeing to provisions of an agreement which would be mutually beneficial to both parties as well as the environment". This was quite a major obstacle in this case study as both companies were unwilling to cooperate in this regard.

Soft effect, i.e. changes in attitude and awareness, generation and diffusion of information

The so-called 'soft effect' relates to changes in attitude and awareness and the generation of information (OECD, 1997:18). Once again this proved to be difficult in the circumstances relating to the study at hand purely, because of reasons stated elsewhere in this paper relating to unwillingness to relinquish responsibility for the FRD.

Community trust in the industry

According to Fischer (2005:69), industry has a reputation for poor environmental performance in the past with environmental impacts that hamper the trust of the community in industry. Although this is not directly applicable to this case study, it is important to be kept in mind for other instances where negotiated environmental agreements may be used.

Public participation process

In terms of section 35(2)(b) of NEMA (1998), "Environmental management co-operation agreements must only be entered into after compliance with such procedures for public participation as may be prescribed by the Minister". As this case study did not construe an EMCA in the true sense of the word due to the absence of a government authority presence, the public participation process did not take place and is not applicable to this case study, but must be kept in mind for EMCAs to be entered into between parties.

Clear, measurable objectives, targets and time frames and negotiated commitments

Clear objectives must be set that can be measured. Targets and time frames that are reasonable should be included in the agreement (Fischer, 2005:33).

The importance of clearly established monitoring procedures

The EMS of the mine included procedures for the monitoring and operation of the FRD. These should be included in the agreement with reasonable and measurable time frames.

Are there sufficient sanctions or incentives in place to ensure compliance?

According to Lehmann (2010:287), one of the disadvantages of negotiated agreements is that they can be viewed as a compromise between government and industry. In view hereof it is important that strict sanctions be included to ensure compliance.

Adequate resources (financial and human) in place?

Adequate resources must be allocated to ensure that the negotiation and implementation of the environmental agreement is done successfully. This would include financial as well as human resources (Fischer, 2005:33).

The extent to which the environmental agreement contributed to the achievement of the objectives (environmental effectiveness) (DEAT, 2000:31)

The purpose of an environmental agreement would be to achieve the environmental targets set therein. According to Lehmann (2010:286), the decision to use an environmental agreement should include whether it can achieve the targets or better such targets.

Does it promote compliance with the objectives of the applicable legislation?

Although there are multiple legislative requirements in this case study, the most important one would be Regulation 704 which requires the separation of clean and dirty water systems to avoid pollution of water resources. If this voluntary environmental agreement had been finalised and concluded by the parties it would have fulfilled this requirement in terms of the management of the FRD.

Stakeholders established for ongoing monitoring and reporting of implementation of agreement

In terms of the agreement the respective parties would have put measures in place to ensure ongoing monitoring and reporting of the implementation of the agreement, had it been concluded.

3.7 Critical evaluation of the voluntary agreement of this case study

This section critically evaluates the environmental management agreement which is the subject of this dissertation at the hand of the criteria identified in paragraph 3.6 above.

Table 3 below indicates the level of conformance to the voluntary agreement pertaining to the current case study. The following levels of conformance to criteria were used in the analysis of level of conformance:

- **Criterion not met:** Very limited or no evidence to indicate conformance to criteria.
- **Criterion was met:** Sufficient evidence to indicate conformance to criteria.
- **Criterion partially met:** Some evidence to indicate conformance to criteria.

Table 3: Level of conformance of case study agreement to criteria identified

Criteria	Discussion / evidence	Level of conformance to agreement
Legal and policy framework	Although there is no clause in the agreement dealing with breach of contract, both parties are bound to compliance due to the various legislative provisions compelling them thereto, for example: • R704 pertaining to the separation of clean and dirty water systems in mining as well as the capacity requirements of clean and dirty water systems, especially regarding the minimum freeboard of 0.8 metres above fully supplied level of a FRD; • The provisions of a mandatory COP in terms of the MHSA regarding residue deposits; and • The prevention of pollution in terms of section 2 of NEMA and section 19 of the NWA.	**This criterion has been met.**
Mutual trust between parties	As mentioned before, there was a lack of mutual trust between the parties with both parties being reluctant to relinquish their respective responsibilities in respect of the FRD.	**This criterion was not met.**
A clear desire by both parties to reach a	It was obvious that Company B was in a position where it was imperative to conclude this agreement for the following reasons: • To clear an audit finding;	**This criterion was not met.**

mutually satisfactory agreement	• To ensure a steady supply of return water for the operation of the plant, thereby ensuring the continuation of the mining activity; • To ensure prevention of pollution of a clean water system/s; and • To ensure that the safety aspect of the operation of the FRD remains a priority. Company A was in a position that did not really necessitate the conclusion of the agreement to reach any of their immediate goals, except keeping the FRD safe. For this purpose they had appointed the contractor for the maintenance of the FRD.	
Soft effect, i.e. changes in attitude and awareness, generation and diffusion of information	It is the opinion of the author that the 'people on the ground' were more inclined to have a change in attitude and awareness than the management of the respective mining companies. Unfortunately decisions are made by management and not the 'people on the ground'.	**This criterion was not met.**
Community trust in the industry	In this instance one could probably have two scenarios" • The 'wider environmental community' keeping an eye on mining in South Africa in general, with specific reference to mining and the environmental impacts thereof; and	**This criterion was not met.**

	• The local community where the mining activities are taking place. Although it is in the interest of mining companies to strive towards minimising environmental impacts for reasons that fall outside the ambit of this paper, it is well known that community trust in mining is lacking. The local communities are mostly interested in the job opportunities and other direct advantages they may receive, so the focus of their trust is different. The 'wider environmental community' will focus on the long-term environmental impacts and the minimisation thereof.	
Public participation process	There was no public participation process for the agreement.	**This criterion was not met.**
Clear, measurable objectives, targets and time frames and negotiated commitments	The agreement did contain clear objectives and targets, but they were not measurable and this could have been improved. Time frames could also have been specified more clearly.	**This criterion was partially met**.
The importance of clearly established monitoring procedures	Although the respective companies had monitoring procedures in terms of their respective EMSs, the details thereof could have been included in this agreement to make it more complete.	**This criterion was partially met**.
Are there sufficient sanctions or incentives	Even though this was a binding agreement, a normal breach of contract clause would not have been appropriate as there were no	**This criterion was partially met**.

in place to ensure compliance?	sanctions or incentives in the event of non-compliance. There are sanctions which could be imposed in terms of the legislation applicable, for example section 2 of NEMA containing the polluter pays principle.	
Adequate resources (financial and human) in place?	Both companies were in a position to contribute adequate resources (financial and human) to the negotiations regarding this agreement, but it was not viewed as a priority by company A due to their position at the negotiating table as described elsewhere in this document. Company B did not have a choice as their certification in terms of ISO 14001 depended upon them putting measures in place regarding the management of the FRD and the agreement seemed to be the appropriate tool to use. The focuses of the parties were different and it caused an imbalance to the whole transaction.	**This criterion was partially met**.
The extent to which the voluntary agreement contributed to the achievement of the objectives (environmental effectiveness)	As this agreement was never concluded for the reasons stated elsewhere in this document, it did not contribute to the achievement of environmental effectiveness.	**This criterion was not met**.
Does it promote compliance with the	Although the negotiations may have improved the awareness of both parties regarding the potential pollution of the clean water	**This criterion was not met**.

objectives of the applicable legislation?	systems and the management of the process water, it did not directly promote compliance with the objectives of the applicable legislation.	
Stakeholders established for ongoing monitoring and reporting of implementation of agreement	The agreement was never concluded or implemented.	**This criterion was not met**.

CHAPTER 4

FINDINGS AND CONCLUSION

This chapter provides the summary of findings in relation to:

- the literature review; and
- the aim of the research and results relevant to the two research objectives before making recommendations and final concluding statements.

4.1 Findings

The aim of the literature review was to critically evaluate negotiated environmental agreements within a complex regulatory regime. Compliance and enforcement mechanisms, such as command and control and alternative mechanisms were identified, with voluntary measures resorting under the alternative measures. These were analysed to explain how negotiated environmental agreements fit into the realm of these mechanisms by demonstrating that negotiated agreements fall under voluntary compliance measures (*cf*. 3.1).

4.2 Findings in relation to the aim of the study

The aim of this research was to critically evaluate negotiated environmental agreements in South Africa. Various negotiated agreements were discussed globally and locally. Globally it was evident that voluntary agreements are often used on the premise that, in the event of non-compliance, regulation will be introduced (*cf*. 3.3).

In comparison to the rest of the world, very few negotiated agreements have been entered into in South Africa, despite legislation making provision for the use thereof, hence the need for this study (*cf*. 3.4). It was clear from the literature review that the implementation and monitoring of negotiated agreements after concluding same, was lacking.

4.3 Findings in relation to objectives:

<u>Objective 1:</u> To identify criteria for evaluating negotiated environmental agreements

The criteria identified for successful negotiated environmental agreements included the following:

- Legal and policy framework;
- Mutual trust between parties;
- A clear desire by both parties to reach a mutually satisfactory agreement;

- The soft effect, relating to changes in attitude and awareness;
- Community trust in the industry;
- A public participation process;
- Clear, measurable objectives, targets and time frames as well as negotiated commitments;
- Clearly established monitoring procedures;
- Sufficient sanctions or incentives to ensure compliance;
- Adequate financial and human resources;
- The extent to which the voluntary agreement contributed to the achievement of the objectives in terms of environmental effectiveness;
- Whether the voluntary agreement promoted compliance with the objectives of the applicable legislation;
- Stakeholders established for ongoing monitoring and reporting of implementation of the voluntary agreement.

It is clear that the drafting and implementation of a negotiated environmental agreement in South Africa is not a simple process and that many factors, such as those produced by the literature review above, are pivotal in the success or failure of concluding a negotiated environmental agreement (*cf*. 3.6).

Objective 2: **To critically evaluate a negotiated environmental agreement in South Africa within its own regulatory regime**

The agreement pertaining to this study was evaluated against the criteria identified in the research. It became clear that there were many areas in which the negotiation and conclusion of the agreement could have been improved as indicated in Table 3 (*cf*. 3.7), such as:

- Mutual trust between the parties;
- A clear desire by both parties to reach a mutually satisfactory agreement;
- A change in attitude and awareness (the so-called soft effect);
- Community trust in industry (with specific reference to the mining industry);
- A public participation process;
- Objectives and targets could have been stated more clearly;
- Sanctions or incentives to ensure compliance;
- Adequate resources (financial and human);
- The agreement at hand did not contribute to the achievement of environmental effectiveness;

- Compliance with objectives of applicable legislation;
- Stakeholders established for ongoing monitoring and reporting of implementation of agreement.

4.4 Recommendations

With reference to the findings as set out above, the following is recommended when negotiating and implementing a negotiated environmental management agreement in South Africa:

- Make an effort to understand the internal politics between the parties, especially in the corporate world.
- Ensure that there is a supportive legal and policy framework to ensure sanction in the event of non-compliance.
- Ensure that both parties have the desire to reach a mutually satisfactory agreement based on mutual trust. This will ensure smooth negotiations towards a mutual goal, thereby ensuring protection of the environment against pollution.
- The last-mentioned fact will ensue the "soft effect", bringing about greater awareness and the generation and diffusion of information.
- A public participation process is vital in conducting the negotiations of a negotiated environmental agreement as it is not only a legal requirement, it will also give a voice to relevant stakeholders and promote community trust in the industry and in negotiated agreements as tools for the prevention of pollution.
- Clear, measurable targets must be set with appropriate monitoring procedures in place and sanctions in the event of non-compliance.
- Adequate financial and human resources must be dedicated to the process to ensure compliance and the achievement of its objectives.
- After implementation, the voluntary environmental agreement must be monitored on an ongoing basis.

(*cf.* 3.7).

4.5 Conclusion

It was the author's experience that in the corporate world it often is a scenario of "dog eats dog" and "everyone for himself". This general concept made it very difficult to encourage the opposing parties to commit to enter into negotiations for the conclusion of an agreement which would not benefit either one of the companies directly. In the current situation, it would only benefit the environment by ensuring prevention of pollution.

The relationship between the two parties to the agreement was strained and communication was not ideal. In this instance, it made the negotiated agreement the perfect instrument to facilitate the process. It would be the 'band aid' for the situation (Le Roux, 2016).

In terms of the definition of an EMCA, the local Municipality or DWAF (Department of Water Affairs and Forestry at the time) or perhaps DEAT should have been involved in the negotiations and as a party to the agreement. On the one hand this may have caused more delays in the negotiation process and the ultimate conclusion of the agreement (Fraser, 2016). However, the relevant governmental authority could have served as a neutral and objective factor (Le Roux, 2016).

Voluntary instruments have been used in many countries as an important complementary approach to pollution reduction, but seldom as a replacement for direct government control OECD, 1997). The disadvantage of this agreement was that it was self-driven (apart from the fact that it was required to clear an audit finding) and therefore the respective companies did not feel compelled to comply or implement the provisions thereof. Industry is not forced to report publicly on compliance. In the case study at hand it could have made a difference to the actual implementation of the agreement if it contained a provision that compliance or non-compliance should be reported publicly in whatever form, provided of course that a penalty clause formed part of the agreement.

According to Lehmann (2010:294-295) the main reason for the failure of voluntary measures is precisely the fact that they are 'voluntary' and do not contain sanctions for non-compliance. That, in the opinion of the author, was definitely a factor that contributed to the failure of the negotiated environmental agreement between Company A and Company B.

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Annexure A

ENVIRONMENTAL MANAGEMENT CO-OPERATION AGREEMENT

PROVIDING FOR THE MANAGEMENT OF THE FRD FACILITY

entered into between

COMPANY B (PROPRIETARY) LIMITED

(a private company incorporated in accordance with the laws of the Republic of South Africa)

Registration Number_____)

(***"Company B"***)

represented by _____ in his capacity as
_____ of Company B, he being duly authorised thereto

and

COMPANY A (PROPRIETARY) LIMITED

Registration Number _____

(***"Company A"***)

represented by _____ in his capacity as
_____ of Company A, he being duly authorised thereto

IN TERMS OF WHICH THE PARTIES AGREE AS FOLLOWS:

1. **INTERPRETATION**

1.1 In this agreement the following words and phrases shall, unless otherwise stated or where inconsistent with the context in which they appear, bear the following meanings:

1.1.1 ***"FRD Facility"*** means the three dams comprising the fine residue deposit facility used by Company B and the small miners;

1.1.2 ***"the MPRDA"*** means the Mineral and Petroleum Resources Development Act 28 of 2002;

1.1.4 ***"The parties"*** means Company A and Company B.

1.1.5 The ***"Sale Agreement"*** refers to the agreement between the parties in terms of which certain mining assets and immovable properties were sold by Company A to Company B and which was concluded on 22 June 2011.

2. **INTRODUCTION**

The parties record the following:

2.1 Prior to the negotiation of this agreement, the Parties entered into a Sale Agreement in terms whereof Company A sold, *inter alia*, mining activities, to Company B. In terms of the Sale Agreement certain liabilities were transferred to Company B on the effective date of the Sale Agreement, being 22 June 2011.

2.2 It is recorded that the application made for the transfer of the mining right from Company A to Company B in terms of section 102 of the MPRDA has not been finalized and to this effect both Company A and Company B are currently deemed responsible for the management of the FRD Facility and both managers of the respective parties currently carry appointments in terms of section 3(1)(a) of the Mine Health and Safety Act, 1996, specifying responsibility of the FRD.

2.3 During the ISO 14001 Audit (Stage 1) of Company B by an auditing company on 25-26 February 2013, a critical non-conformance was identified regarding the management of the FRD Facility. It was stated that a positive recommendation for certification will be impossible given the status of the current process water management system.

2.4 The parties acknowledge that the optimal operation and effective control and management of the FRD Facility will assist in the prevention of pollution and potential overspills that may impact on the surrounding wetland systems.

2.5 Therefore this Agreement serves the purposes of clarifying the roles and responsibilities of the parties and their respective contractors, ensuring that the Safety, Health and Environmental obligations are addressed by setting out the rights and obligations of the Parties until the section 102 transfer has been authorised.

2.6 Both parties shall be bound to exercise all their rights under this agreement in a reasonable manner.

2.7 Company B hereby warrants that all employees, representatives and contractors of Company B shall refrain from any act or omission which may in any way prejudice the interests of Company A

2.8 For the purposes of clause 2.7, the word “warrants” shall mean all such obligations (without limiting the generality hereof) arising from any applicable legislation and Codes of Practice insofar as the FRD Facility is concerned. And Company A hereby warrants that all employees, representatives and contractors of Company A shall refrain from any act or omission which may in any way prejudice the interests of Company B.

3. COMPANY B’S RIGHTS AND OBLIGATIONS

3.1 Company B will for the duration of this agreement be responsible for the day to day management and operation of the FRD Facility.

3.2 Company B will be responsible for the appointment, payment and management of the contractor managing the FRD Facility.

3.3 The contractor will report directly to Company B and take instructions only from Company B representatives, except when there is a threat of a safety incident in which case Company A may intervene, but with due notice to Company B.

3.4 Company B will be responsible for the maintenance of the FRD to ensure that the FRD Facility remains in a safe condition. This includes maintenance to the penstocks, catwalks, ringfeeds, deliveries, stormwater management measures, solution trenches, perimeter access roads, silt traps, return water sump, and return water pumps.

3.5 Company B will be responsible to ensure that the FRD is operated within the parameters set in the relevant Code of Practice as well as the operating manual, particularly with regard to the management of the freeboard, water management on the dam, proper distribution of residue on the dams, adhering to the rate of rise constraints and control of slime density.

3.6 As part of this agreement Company B accepts responsibility for the co-deposition of the slimes from the small miner. Company B has the right not to accept the small miner fines residue if the density is less than the specified minimum, or if the total deposition rate exceeds the specified maximum.

3.7 Company B undertakes to report to Company A on a monthly basis regarding the following:

- Freeboard status;
- Monthly deposition rate;
- Slime densities; and
- Measurement of piezometers in terms of stability.

4. COMPANY A'S RIGHTS AND OBLIGATIONS

4.1 As Company A currently has an agreement with a management contractor in respect of the management of the FRD Facility, the details of the current agreement between Company A and the management contractor should be disclosed to Company B to enable Company B to take control of the day to day management of the FRD Facility.

4.2 At the termination of the current agreement between Company A and the management contractor, Company A will not renew the agreement with the management contractor, but will allow Company B to enter into such agreement, subject to the terms and conditions of this agreement and more specifically clause 3 thereof.

4.3 Company A will have the right at any time to enter the premises of the FRD Facility to conduct inspections, but due notice thereof shall be given to Company B in this regard.

5. DURATION

The rights and obligations referred to in clauses 3 and 4 respectively under this agreement shall endure until the transfer of the section 102 mining right in terms of the MPRDA.

6. **RISK**

Company B acknowledges that the rights granted to Company B under this agreement shall be exercised by Company B at Company B's sole and absolute risk.

7. **ARBITRATION**

7.1 Any dispute between the parties in regard to :-

7.1.1 the interpretation of;

7.1.2 the effect of;

7.1.3 the parties' respective rights and obligations under;

7.1.4 a breach of;

7.1.5 any matter arising out of this agreement;

shall be decided by arbitration in the manner set out in this clause.

7.2 The said arbitration shall be held subject to the provisions of this clause:-

7.2.1 in Kimberley;

7.2.2 informally;

7.2.3 otherwise in accordance with the Rules of the Arbitration Foundation of South Africa;

it being the intention that if possible it shall be held and concluded within 21 (Twenty One) working days after it has been demanded.

7.3 The arbitrator shall be if the question in issue is:

7.3.1 primarily an accounting matter, an independent accountant with no less than 10 years' experience, agreed upon between the parties;

7.3.2 primarily a legal matter, a practising advocate or attorney with no less than 10 years' standing agreed upon between the parties;

7.3.3 primarily a rental matter, a practising valuer with no less than 10 years' standing agreed upon between the parties;

7.3.4 any other matter, an independent person agreed upon between the parties.

7.4 If the parties cannot agree upon a particular arbitrator in terms of clause 9.3 above within 7 (Seven) business days after the arbitration has been demanded,

the nomination in terms of 9.3.1, 9.3.2 , 9.3.3 and 9.3.4, as the case may be, shall be made by the President of The Law Society of the Cape of Good Hope or its successor body in the Cape Province within 7 (Seven) days after the parties have so failed to agree.

7.5 The parties irrevocably agree that the decision in these arbitration proceedings:-

7.5.1 shall be reduced to writing;

7.5.2 shall be binding on them;

7.5.3 shall be carried into effect; and

7.5.4 may be made an order of any Court of competent jurisdiction.

7.6 The foregoing provisions of this clause 9 shall not preclude the bringing of any proceedings by any of the parties for urgent relief by way of interdict or otherwise pending an arbitration.

8. ***FORCE MAJEURE***

Non-performance by either party shall be excused to the extent that performance is rendered impossible by strike, acts of God, governmental acts or restrictions, failure of suppliers or any other reason where failure to perform is beyond the control of the non-performing party.

9. ***DOMICILIA* AND NOTICES**

9.1 The parties appoint the following addresses as their *respective domicilia citandi et executandi* for all purposes under this agreement:

COMPANY A: _____

_____

_____

COMPANY B _____

_____

_____

9.2 The *domicilium* of a party may be changed by such party to any other physical address within the Republic of South Africa provided that not less that 21 (Twenty One) days' prior written notice of such change is given to the other party.

9.3 Any written notice or communication between the parties which is addressed to the following postal address of the addressee shall be deemed to have been received by the addressee on the 14th business day following the date upon which such notice was tendered to the postal authorities for posting by prepaid registered post:

COMPANY A P O Box _____

_____

_____

COMPANY B P O Box _____

_____

_____

9.4 The postal address of a party may be changed by such party to any other postal address in South Africa (excluding a poste restante) provided that not less than 21 (Twenty One) days prior written notice of such change is given to the other party.

9.5 For the purposes of the above provisions relating to changes of address, the expression ***"business day"*** shall mean all days excluding Saturdays, Sundays and public holidays only.

10. **MISCELLANEOUS**

10.1 This document (insofar as it is not in conflict with the Sale of Assets Agreement) together with the Sale Agreement, records the entire agreement between the parties

10.2 No further agreement purporting to amend or cancel this agreement or the Sale Agreement and no additional waiver by a party of any rights under this agreement shall be valid unless reduced to writing and signed by both parties.

10.3 No indulgence, concession or extension of time which may be permitted by a party shall be capable of prejudicing the rights of such party under this agreement and the Sale Agreement.

10.4 The parties acknowledge in favour of each other that no warranties or representations material to the provisions of this agreement which are not expressly recorded in this document have been made or given by or on behalf of either party.

10.5 Clause headings are inserted for the sake of convenience only and shall be ignored in the interpretation of this agreement.

11. **COSTS**

There will be no costs incurred in connection with the negotiation, drafting and finalisation of this agreement.

THUS DONE and SIGNED at _____ on the _____ day of _____ 2014

AS WITNESSES:

1. _____ **For COMPANY B (PROPRIETARY) LIMITED**

2. _____ _____

THUS DONE and SIGNED at _____ on the _____ day of _____ 2014

AS WITNESSES:

1. _____ **For COMPANY A PROPRIETARY LIMITED**

2. _____ _____