



STRIKING A BETTER BALANCE:

AN INVESTIGATION OF MINING PRACTICES IN NAMIBIA'S PROTECTED AREAS

Stanford
Law School

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and Environmental Law Clinics

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of Namibia**

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Abbreviations

ASEC	A. Speiser Environmental Consultants cc
CLMA	Conservation and Land Management Act, 1984
CoM	Chamber of Mines of Namibia
CSP ²	Center for Science in Public Participation
DA1	Diamond Area Number 1
DA2	Diamond Area Number 2
DEA	Directorate of Environmental Affairs
DPW	Directorate of Parks and Wildlife
EA	Environmental Assessment
EAA	Environmental Assessment Act, 1999
EIA	Environmental impact assessment
EMA	Environmental Management Act, 2007
EMP	Environmental Management Plan
EPA	Environmental Protection Act, 1986
EPL	Exclusive Prospecting License
IIED	International Institute for Environment and Development
IUCN	World Conservation Union
LAC	Legal Assistance Centre
LHU	Langer Heinrich Uranium
MDRL	Mineral Retention Deposit License
MET	Ministry of Environment and Tourism
ML	Mining License
MME	Ministry of Mines and Energy
MRC	Mineral Right's Committee
NDP3	National Development Plan version 3
NEPA	National Environmental Policy Act (Australia)
NEPL	Non Exclusive Prospecting License
NGO	Non-governmental Organisation
NNP	Namib Naukluft Park
RL	Reconnaissance License
RoD	Record of Decision
SAIEA	Southern African Institute for Environmental Assessment
SCP	Skeleton Coast Park
SD	Sustainable Development
SEA	Strategic Environmental Assessment
SZ	Skorpion Zinc
WB	World Bank
WRI	World Resources Institute

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Executive Summary

With its unique ecosystems, mineral reserves, and developing institutions, Namibia can harness a wide range of resources both to improve the welfare of its citizens and to protect the integrity of its environment. From eco-tourism to mineral extraction, many of Namibia's current economic development plans depend on the long-term availability and integrity of the country's natural resources. A central challenge in any effort to create a balanced and environmentally sustainable development plan is to discern among those activities that will likely dead end in exploitative, short-term growth spurts and those that could provide productive resources for future generations.

This report explores a number of ways in which the Namibian Government could address the critical development tension that Namibia is now confronting: how to balance the economic benefits of mineral extraction with the threat that it poses to the long-term integrity of protected areas with the economic benefits of eco-tourism and the cost of implementing a viable environmental protection program. These issues have been recognized and explored in several Government policies, such as the Policy on Prospecting and Mining in Protected Areas (1999). This report seeks to advance the discussion of the problems, opportunities, and possible solutions to the competing interests of mineral extraction, environmental and wildlife conservation, and eco-tourism. More specifically, the report explores the history of mining operations; the laws, regulations, and policy protections put into place for protecting the environment; the current institutional framework; and a range of international best practices and case studies that offer lessons from which Namibia may wish to draw.

NAMIBIA'S CHALLENGES AND OPPORTUNITIES

As currently practiced, mining operations threaten the integrity and stability of Namibia's vulnerable protected areas and the environmental resources they provide. Moreover, because many important and fragile ecosystems have not yet been included in the national protected areas system, they are at immediate risk of irreversible degradation. Adverse environmental mining impacts range from permanent landscape alteration to soil contamination and erosion, water contamination, the loss of critical habitats for sensitive plant and animal species, and ultimately, the loss of wildlife. Because Namibia's protected areas include environmentally sensitive desert and dry land regions where the rate of ecological recovery is extremely slow, the potential for regeneration at any time in the near future is virtually non-existent. In addition, as recently proposed projects like the Valencia Mining Exploration Operation have shown, the amount of water needed for the investigation, construction, and operation of even a single proposed mining operation may lead to a severe water shortage in the area with the potential to threaten wildlife populations, farming, and eco-tourism operations. These impacts may result in economic losses at the local and national level as mining activities degrade or destroy existing or potential competing uses of the land, such as agriculture or eco-tourism.

The central challenge for Namibia is planning and managing the best suite of land uses that will allow for economic development while simultaneously ensuring that environmental health, including the conservation of biological diversity, fragile ecosystems, and landscape integrity, is maintained. During its first decade of independence, the Namibian Government enacted a number of laws and policies intended to protect fragile ecosystems, manage mining operations, and ensure that all commercial development projects eliminate or, at the very least, mitigate adverse impacts on the environment, people, and wildlife. These laws establish clear mandates in some cases but not in others; consequently many gaps remain in the enforceable regulatory structure. In addition, the resources needed for proper scientific analysis, monitoring, and enforcement capacity are still far below the level required to ensure adequate compliance with protected area, environmental management, and mining laws.

Many industrial operations have been allowed to expand or have been abandoned without remediation efforts, due to the absence of firm requirements under the laws in effect up through the present. But there is still a significant opportunity to create more accurate assessments of the benefits and costs of mutually exclusive or antagonistic activities so that Governmental, industry, and civil society stakeholders can work together to make better informed policy decisions.

THE WAY FORWARD

After analyzing the legal and policy framework, the written opinions of national stakeholders, international best practices, and national and international case studies, this report concludes that the challenges facing Namibia can be addressed through a series of concerted and proactive steps. In brief, these include:

1. Modification of Existing and Proposed Legislation

- ***The Environmental Management Act of 2007***

- Strengthen the Act by requiring all existing prospecting and mining operations to comply with its mandates within one year, without exceptions.
- Amend the Act to make circumvention of the environmental assessment requirement a form of corruption punishable under the criminal law.

- ***The Minerals (Prospecting and Mining) Act of 1992***

- Amend the Act to require all mining license applicants to post adequate and sufficiently liquid assets with the Government (e.g., a bond) to cover all of the estimated costs of mine closure, including reclamation, waste treatment and disposal, long-term post-closure monitoring, maintenance, and the investigation, analysis, and treatment of human and wildlife exposures.
- Amend the Act to require background investigations of corporations as well as individuals to check for prior environmental violations or any other history of illegal practices.

- ***The Proposed Parks and Wildlife Management Bill***

- Establish categories of protected areas that will not be available for any prospecting or mining activities. These areas would include those that the people of Namibia would like to preserve as forever wild and untouched.
- Create a legal mechanism for identifying and classifying Namibia's protected lands in order to establish the purpose for each class of protected land, which will help decision-makers determine whether mining should be allowed in a given area.
- Incorporate a provision that specifies that the designation of an area as "protected" may only be altered or revoked by an act of Parliament.
- Delineate specific criteria to be used in all environmental assessments of proposals for any prospecting or mining activities within protected lands.
- Enshrine in the law a strong presumption against any prospecting or mining activities in protected lands.

2. Increase Enforcement and Proper Implementation of Current Laws

- Require that all environmental management plans for prospecting and mining projects in protected lands meet a heightened duty to prevent environmental harms.
- Enact the regulations needed to bring the Environmental Management Act into force including, at a minimum, the following provisions:
 - Provide detailed instructions for developing an environmental impact assessment ("EIA") to ensure that the information collected and utilized in a required EIA is accurate and reliable, and fully reflects pre-project site conditions.
 - Require identification of all lifecycle costs in the EIA report, including the cost of reclamation, closure, re-contouring, land stabilization, waste treatment and disposal, long-term post-closure monitoring and maintenance, and investigation and treatment of human and wildlife exposures.
 - Provide detailed regulations for the inclusion of financially and physically feasible rehabilitation plans to be included in an environmental impact assessment.
 - Include precise and detailed information in the Records of Decision issued on permit applications, specifically spelling out the criteria used in making the decision; reasons for the decision; transfer of rights and obligations if there is a change of ownership of the project or property; and the specific conditions agreed to by the company/applicant to protect and restore the environment.
- Ensure quality control in the environmental assessment guide and review process by screening unethical or unqualified environment assessment consultants out of the system.
- Perform a national strategic environmental assessment for all protected lands to take into account the cumulative impact of granting multiple mining and exploration permits in these areas.

- Use independent experts to help with assessments, inspections, and audits when there is a lack of technical expertise among ministry staff.
- Appoint an Environmental Commissioner to enforce the Environmental Management Act.

3. Development and Practice of Improved Policy

- Prohibit all new prospecting and mining activities in existing and proposed protected areas until the Environmental Management Act regulations are in force.
- Upon expiration of a mineral license within a protected area, deny all requests for renewal periods and make the entire area unavailable for mining when there are no more active licenses.
- Encourage companies to voluntarily forfeit existing mineral licenses in existing and proposed protected areas as a part of good corporate citizenship campaign.
- Improve knowledge and technical skills among decision-makers to ensure the undertaking, completion and implementation of quality environmental assessments and strategic assessments.
- Government agencies should presume that any proposed project will have adverse environmental impacts and should place the burden on the applicant to rebut this presumption.
- Provide sufficient resources and funding to the Ministry of Environment and Tourism to educate the public and mobilize public awareness, support, and appreciation for Namibia's protected lands.
- Provide detailed public education materials to all stakeholders involved in a specific prospecting or mining project in order to ensure their ability to participate fully in the assessment process.
- Create an alert list of stakeholders who must be notified by culturally appropriate means (such as local language newspapers, radio stations, community or church meetings) when an application for mining has been made and also when any environmental impact assessment reports or expert evaluations have been completed. All of these documents should be made available at the Office of the Environmental Commissioner and copies of all reports and evaluations should be provided to the public at no cost.
- As civil society becomes increasingly involved in holding Government officials accountable for the proper implementation and enforcement of environmental and mining laws and policies, the Namibian Government should embrace this as an opportunity to strengthen its partnership with the public.

Introduction

As Namibia's industrial sector continues to grow, the Government must harmonize the demand for rapid economic growth with the need to conserve natural resources and protect the environment on which its citizens depend. While economic growth and environmental protection are not always mutually exclusive or antagonistic, they often collide in the context of extractive industries, particularly in the case of mining activities. Investments in mines that initially generate short-term spurts of economic growth may actually leave the country worse off in the long-term by leaving the Government with the responsibility of dealing with costly environmental liabilities. Both "developed" and "developing" states have confronted and continue to face the challenges of regulating prospecting and mining in a way that boosts the economy and also protects valuable environmental resources.

In the case of Namibia, the lack of a coordinated approach among the relevant ministries and the absence of any structured assessment process for prospecting and mining operations threaten to deplete the country's natural resources and hamper the development of eco-tourism and other promising sectors of Namibia's economy. As global interest in Namibia's mineral resources continues to grow, Namibian decision-makers must plan strategically to ensure that mineral exploitation results in growth that benefits the public treasury and also leaves the land in a condition to provide for future generations through sustainable provision of natural resources or through such activities as eco-tourism. Deciding how to strike the proper balance is not easy, because the impacts of mining are varied, complex, and long lasting, and the precise economic trade-offs represented by conservation and mineral exploitation are difficult to measure.

This report aims to simplify the decision-making process by exploring one dimension of this challenge: examining policies that may permit the Government to harmonize the objective of maintaining the integrity of protected areas¹ with that of managing prospecting and mining operations so that both enterprises benefit current and future generations. The report examines the complex impacts of mining in protected lands; the legal and institutional frameworks that govern prospecting, mining, and protected land management; and the principles, best practices, and lessons learned at the international level. Though the report deals specifically with protected lands, the analysis and recommendations provided may apply to other lands as well given that the concerns and tradeoffs are likely to be quite similar.

1.1 RATIONALE FOR THIS INVESTIGATION

The Legal Assistance Centre (LAC) convened an informal meeting of interested parties to gauge the significance of mining's potential impacts in national parks and protected areas and to decide on an appropriate response. There is considerable concern among both Government and civil society institutions that the current policies do not achieve an appropriate and sustainable balance between the competing demands being made of the land. The LAC focused specifically on protected lands because the shortcomings in Government policy are frequently the most visible in areas set aside for habitat integrity, for present and future tourism, and for research and educational purposes.

1.2 REPORT ROADMAP

This report is intended to serve as a useful and accessible tool for Namibian citizens, advocates, and decision-makers seeking to improve the management of prospecting and mining operations and the conservation of protected areas. To this end, the report has been organized as follows:

- Section 2 presents the history and economic context of protected areas and mining in Namibia, with a brief examination of the growth of the mining and tourism sectors.
- Section 3 details the institutions, laws, and policies that govern and guide national development, mining operations, parks and wildlife management, environmental impact analysis, and forest and biodiversity protection.
- Section 4 reviews some of the most common environmental problems created by mining operations and surveys how much mining activity is currently happening in three of Namibia's largest national parks.

¹ This report uses the terms "protected area" and "protected land" interchangeably to refer to any national park, reserve, forest, national monument, or conservancy given protection under current Namibian law. Each of these lands are presently protected under separate laws, though currently proposed legislation would create a unified system of classification for all the country's protected lands. See section 3.2 below.

- Section 5 presents a slate of best practices recommended by scientific experts from around the world and international bodies, all selected for their relevance to Namibia's particular circumstances.
- Section 6 examines case studies from six countries facing similar challenges regarding the balancing of conservation, mining, and tourism opportunities in protected lands. The shortcomings of some of these countries' approaches are discussed to illustrate practices that Namibia may want to avoid.
- Finally, Section 7 draws on all of the foregoing analysis, as well as the opinions of national stakeholders, to offer recommendations for practice, policy, and legal changes as well as possible methods to improve implementation and enforcement of the law.

1.3 METHODOLOGY

This report draws from four main sources of information: 1) stakeholder input derived from a series of surveys, meetings, and interviews;² 2) a legal desk analysis of relevant Namibian laws and policies; 3) international best practices and case studies; and 4) a field analysis of three protected areas where mining activity is already underway.

The scientific investigators for this report solicited stakeholder input through in-person meetings and telephone interviews.³ Stakeholders received a short background document and questionnaire in advance of meetings and telephonic interviews.⁴ Together, the interviews and questionnaire were designed to gauge perceptions of:

- the effectiveness of environmental safeguards in protected areas;
- the level of institutional capacity; and
- the impacts of mining and exploration.

The data gathered from stakeholder input sessions was also utilized in the development of the recommendations for this report.

² The list of stakeholders interviewed can be found in Appendix B.

³ These investigators were Dr. Chris Brown of the Namibia Nature Foundation (NNF); Ms. Alexandra Speiser and Ms. Michele Yates of A. Speiser Environmental Consultants (ASEC); and Dr. Peter Tarr and Mr. Marvin Sanzila of Southern African Institute of Environmental Assessment (SAIEA).

⁴ The full survey results can be found in Appendix D.

Background

2.1 BIODIVERSITY IN PROTECTED AREAS

Namibia is acclaimed for its species richness, habitat diversity, and biological distinctiveness. It is home to three-quarters of the mammal species of Southern Africa, with fourteen of those species native to the country. Namibia is also host to:

- 4,350 species and subspecies of higher plants, 17% of which are native
- 1,541 insect species, 24% of which are native
- 71 species of reptiles, 28% of which are native
- 14 bird species, 2% of which are native
- 18 species of arachnid, 11% of which are native

Namibia has been an evolutionary hub for certain groups of organisms like melons, succulent plants, solifuges, geckos, and tortoises.⁵ Hotspots for this biodiversity include the Namib, the planet's oldest desert; the Sperrgebiet, a national park on the southern coast of Namibia in the former territory of Diamond Areas 1 and 2; and the Namib Escarpment. Namibia occupies a highly strategic location in terms of trans-boundary conservation, bordering biodiversity rich areas of countries such as Botswana, Zambia, and Angola. Currently, about fifty percent of all species in Namibia are of some conservation concern, including the black rhino and cheetah, which are listed worldwide as endangered species.

2.2 NAMIBIA'S ECONOMY AND TOURISM

Namibia's network of National Parks and other protected areas such as reserves, national monuments, and conservancies house a wide variety of threatened endemic species as well as unique landscapes and geologic formations that draw increasingly large numbers of tourists. The extent of the tourism industry's potential as a source of revenue appears not to have been fully explored, but it already contributes significantly to Namibia's economic development. Tourism and travel contributed an estimated N\$6.6 billion to Namibia's economy in 2006, equivalent to 14.2% of the total GDP for the same year. Real growth was around 14.8% in 2006, and preliminary accounts indicate real growth at 9% for 2007. It is estimated that tourism will contribute N\$28.4 billion to GDP by the year 2017.⁶ The tourism industry contributes an estimated 18,800 jobs to the national economy, the equivalent of 4.7% of all jobs in 2006. Tourism statistics for 2007 show an 11% increase in tourism from 2006, amounting to a total of 928,912 tourists.⁷ Comparably, in 2006 tourism accounted for about 9.4% of Botswana's GDP⁸ and 11.4% of Kenya's GDP.⁹

If managed carefully, tourism offers a sustainable option for economic growth and development well into the future. Tourism is a long-term activity with environmental impacts that are more easily controlled.

One of the goals outlined for the tourism sector in the National Development Plan is to create new tourism investment opportunities focusing on proclaimed conservation areas and cultural heritage sites. As discussed below, if prospecting and mining activities continue to be permitted to operate in such areas the potential for direct conflict with tourism seems inevitable. It is critical that the short-term benefits of mining do not jeopardize the longer-term opportunities associated with tourism, which is an industry that far more easily lends itself to compliance with environmental conservation mandates.

2.3 NAMIBIA'S ECONOMY AND THE MINING SECTOR

The mining sector is an important component of Namibia's economy. With Africa's fifth largest mining sector, Namibia has a wide range of valuable non-renewable resources including diamonds, gold, pyrite, uranium, copper, semi-precious stones, and base metals.

⁵ United Nations Development Programme, Strengthening the Protected Area Network (SPAN) 1, *available at* http://www.undp.org/gef/05/documents/writeups_doc/bio/NamibiaSPAN.doc.

⁶ Namibia Tourism Board, Namibia Tourism Satellite Account 2nd Edition (2008) 1, *available at* http://www.namibiatourism.com.na/trade_docs/ntb_report_contents.pdf.

⁷ Namibia Tourism Board, Tourist Arrival Statistics 2007: Tables (2007) 1, *available at* http://www.namibiatourism.com.na/trade_docs/tourist_arrival_tables_2007.pdf.

⁸ World Travel and Tourism Council, Botswana: The Impact of Travel and Tourism on Jobs and the Economy (2007) 62, *available at* http://www.botswanatourism.co.bw/news_events/FinalWTTC_Botswana.pdf.

⁹ World Travel and Tourism Council, Travel and Tourism Economic Impact: Kenya (2009) 14, *available at* <http://www.wttc.org/bin/pdf/temp/kenya.html>.

After Government services, the industry contributes the most to the GDP. The Chamber of Mines' (CoM) Annual Report for 2006-2007 indicates that the mining sector achieved record revenue of N\$13.8 billion in 2007.¹⁰ The industry contributed 11.7% to the GDP in 2006 (N\$5.5 billion) with diamond mining alone contributing N\$4.4 billion, and other mining and quarrying contributing N\$1.5 billion.¹¹

Mining accounts for about 50% of Namibia's foreign exchange earnings, and is the largest private-sector area of employment. At the end of 2007, mining companies belonging to the Chamber of Mines (representing a little less than half of all mineral license holders in the country) directly employed 7901 permanent employees and 2860 contractors.¹²

In 2006, the industry spent N\$3.2 billion on fixed investment, contributing 26.5% to Namibia's entire fixed investment portfolio and surpassing investment by the entire central government for the fifth year in a row.¹³ In 2006, exploration expenditures reached N\$482 million, its highest level since independence.¹⁴

Currently, Namibia is the fourth largest exporter of non-fuel minerals in Africa, and the world's fifth-largest producer of uranium, with the Rössing and Langer Heinrich Uranium companies accounting for about 10% of the world's uranium.¹⁵ The likelihood of this figure rising is high given many countries' increased interest in the Namibian economy, and the fact that Namibia is already undergoing a uranium rush. An extensive uranium province (in geological terms) underlies a large portion of the country, and numerous applications for exploration licenses have been lodged with the Ministry of Mines and Energy (MME).

Renewable resources such as agricultural land, forests and wildlife, and water and fisheries also form part of the natural resources that contribute significantly to the national economy.¹⁶

¹⁰ The Chamber of Mines represents the interests of about seventy mining and exploration companies active in Namibia. Chamber of Mines of Namibia, About Us, *available at* <http://www.chamberofmines.org.na/main/about-us/about-us.html>.

¹¹ Chamber of Mines of Namibia, Annual Review: 2006-2007 (2007) 82, *available at* http://www.chamberofmines.org.na/uploads/media/2006-07_Annual_Review.pdf.

¹² *Id.*, 83.

¹³ Fixed investment refers to capital investments in physical, tangible assets, as opposed to liquid, financial capital investments.

¹⁴ *Id.*

¹⁵ *Id.*, 67.

¹⁶ National Development Council of Namibia, Third National Development Plan, *available at* <http://www.npc.gov.na/docs/ndp3info.htm>.

Mineral Licensing Process

Namibia's laws and policies provide for a number of environmental safeguards for prospecting and mining within protected lands. Although portions of it are not judicially enforceable, the Constitution of Namibia provides direction for establishing these laws and policies.¹⁷ The relevant Constitutional provisions include the following:

Article 91 of the Constitution of the Republic of Namibia (1990)

The Ombudsman shall have "the duty to investigate complaints concerning the over-utilization of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia."¹⁸

Article 95 of the Constitution of the Republic of Namibia (1990)

The State shall actively promote and maintain the welfare of the people by adopting policies aimed at the maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future; in particular, the Government shall provide measures against the dumping or recycling of nuclear and toxic waste on Namibian territory.¹⁹

Article 100 of the Constitution of the Republic of Namibia (1990)

Land, water, and natural resources below and above the surface of the land and in the continental shelf and within the territorial waters and the exclusive economic zone of Namibia shall belong to the State if they are not otherwise lawfully owned.

In addition, Article 144 of the Constitution provides that "the general rules of public international law and international agreements binding upon Namibia under this Constitution shall form part of the law of Namibia."²⁰ A number of international treaties and conventions that have been signed and ratified by Namibia are also relevant to mining and the environment. These include, among others:

- **Ramsar Convention of Wetlands.** Namibia became a signatory of this convention in 1995 and currently has four Ramsar sites located within the country.
- **Convention on Biological Diversity.** Namibia became a signatory of this convention in 1992 with the purpose of conserving biological diversity and sustainable use of its components.
- **United Nations Convention to Combat Desertification.** Namibia signed on to this convention in 1994 to combat desertification and lessen the negative effects of drought.
- **Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.** Namibia became a signatory of this convention in 1995 with the purpose of ensuring responsible movement and disposal of hazardous waste in a manner that is environmentally sound.²¹

Given the importance of mineral extraction to Namibia's economy, the Constitution's promise to promote environmental protection, and Namibia's international commitments to environmental protection, the rules and regulations applicable to the mining industry are surprisingly loose. Before examining specific problems with the various applicable laws, though, it is helpful to get a snapshot of the types of mining licenses that are available, and what is currently required to obtain them.

3.1 TYPES OF MINING ACTIVITIES AND LICENSES

The Minerals Act of 1992 provides for the issuance of Mining Claims, Non- Exclusive Prospecting Licenses, and Mineral Licenses.

¹⁷ See Constitution of the Republic of Namibia, art. 101.

¹⁸ Constitution of the Republic of Namibia, art. 91. Although on paper the Ombudsman has the Constitutional power to investigate environmental complaints, in practice this is not really the case. The Office of the Ombudsman has only dealt with one environmental complaint in the past, relating to Ramatex's textile plant on the outskirts of Windhoek.

¹⁹ *Id.*, art. 95.

²⁰ *Id.*, art. 144.

²¹ Christina Mansfeld, Environmental Impacts of Prospecting and Mining in Namibian National Parks: Implications for Legislative Compliance 112-115 (April 2006) (unpublished Masters thesis, University of Stellenbosch), available at etd.sun.ac.za/jspui/bitstream/10019/1646/1/Mansfeld,%20C.pdf (hereinafter "Mansfeld").

Mining Claims, available only to Namibian citizens, provide mineral rights to small-scale operators and individuals with limited financial and other resources. A maximum of ten such claims per person may be held for a three-year period, with the possibility of an indefinite number of two-year extensions.²² While an operator holds a mining claim, prospecting and mining may take place with minimal restrictions.

Similarly, a Non-Exclusive Prospecting License (NEPL) allows a person to prospect anywhere in the country including privately owned farms, with the sole exclusion being closed areas such as game reserves. An NEPL lasts for one year, and holders often peg a mining claim onto the NEPL in order to continue prospecting or mining activities. Both a Mining Claim and an NEPL are registered with the Mining Commissioner upon payment of a nominal fee.

A Mineral License can take the form of one of the following four sublicenses:

- A *Reconnaissance License* (RL) is used to explore wide areas, usually through remote-sensing and air-borne mapping, and is valid for six months with a possible single six-month extension. An RL generally excludes physical activities and therefore does not result in adverse environmental impacts. An RL may be exclusive to particular mineral groups in certain cases.
- An *Exclusive Prospecting License* (EPL) is a more formal ownership right that confers exclusive rights to land up to 1000 km² in size for an initial period of three years, with the option of two renewal periods of two years each.²³ The exclusive rights are granted only for the minerals specified in the license; therefore another entity may have an EPL for a different mineral on the same land that is operative at the same time.
- A *Mineral Deposit Retention License* (MDRL) allows an exploration company to retain rights to significant deposits discovered or secured under an EPL that cannot, for economic or technical reasons, be exploited at the time of discovery. MDRLs last for an initial period of five years, with the possibility of an indefinite number of two-year extensions. However, if the Minister finds that technological or economic improvements have occurred that would allow for profitable mineral extraction, he or she may require the licensee to either apply for a mining license or relinquish the MDRL.²⁴
- A *Mining License* (ML) entitles a company to exclusive rights to mine an area for a period of up to 25 years, renewable for an additional 15-year period, following the discovery of a commercially viable deposit under an EPL. ML holders also have the exclusive right to approve the development of other mines within the same area.

3.2 RELEVANT LAW AND POLICY WITHIN THE PERMITTING PROCESS

The **Minerals (Prospecting and Mining) Act of 1992** (Minerals Act) vests all of Namibia's prospecting and exploitation rights in the State, with the power to grant licenses given to the Minister of Mines and Energy. It also gives the Minister the authority to appoint a Mining Commissioner to assist in the licensing process.

All applications for mineral licenses must be made on forms distributed by the Ministry, accompanied by payment of a small fee.²⁵ The application forms for the various licenses are easily accessible from the Ministry of Mines and Energy website.²⁶

The information required by these forms varies by license, but usually calls for information on company ownership, location and geological information on the desired claim area, company technical expertise, timeline for the mining activities, and proof of financial resources. In addition, depending on the particular mineral license applied for, information regarding existing environmental conditions and the potential for environmental degradation resulting from prospecting or mining operations must be disclosed. A reconnaissance license application requires no environmental impact information to be provided because operations under the license are assumed to have little to no adverse impact on the environment. The applications for an EPL, an MDRL, and a Mining License, however, require that the individual or company applicant provide information on the "condition of, and any existing damage to the environment in the area" and "an estimate of the effect which the proposed prospecting operations may have on the environment and the proposed steps to be taken in order to minimize or prevent any such effect."²⁷ A Mining License further requires disclosure of the "manner in which it is intended to prevent pollution, to deal with waste, to safeguard mineral resources, to reclaim and rehabilitate land disturbed by way of prospecting operations and mining operations, and to minimize effects on land adjoining the mining area."²⁸

²² Minerals Act, section 37 (1992) (Nam.).

²³ *Id.*, section 71(2). The Minister of the MME has the discretion to waive the restriction of only two renewal periods.

²⁴ *Id.*, sections 82, 88.

²⁵ *Id.*, section 47.

²⁶ Applications are available at <http://www.mme.gov.na/mines/forms.html>.

²⁷ Minerals Act, sections 68(f)(i)-(ii), 79(f)(i)-(ii), 91(f)(i)-(ii).

²⁸ *Id.*, section 91(f)(iii).

Upon review of the application and possible recommendations from the Mineral Rights Committee (MRC),²⁹ the Mining Commissioner has the authority to require any mineral license applicant to conduct and submit an environmental impact assessment report (EIA) and/or environmental management plan (EMP).³⁰ The Commissioner may also require that the EMP be reviewed and changed from time to time as required.³¹

The Minerals Act holds all mineral license holders liable to pay compensation for “any damage done or caused to the surface of any land or to any water source, cultivation, or building or other structure therein or thereon” as a result of any prospecting or mining operations.³²

Since the Minerals Act does not provide guidelines for developing and reviewing required EIAs and EMPs, the MET drafted and the Government adopted the **Environmental Assessment Policy (Environmental Policy) in 1994**. The Environmental Policy serves as a non-binding guideline for the environmental assessment process and calls for integrated environmental management through the proper execution of EIAs.³³ Specifically, it identifies “mining, mineral extraction, and mineral beneficiation” as activities requiring EIAs.³⁴ The policy stipulates that the EIA process should include submission of an EIA to the Environmental Commissioner, an official yet to be named sixteen years after the policy was enacted, who is supposed to be appointed by the MET and housed in the office of the National Planning Commission. The policy also indicates the Government's preference that the EIA process provides information and creates accountability for decision-makers, establishes project options and alternatives, strives for public participation and broad sector involvement, accounts for environmental costs and benefits, incorporates international norms and standards, considers secondary and cumulative environmental impacts, and promotes sustainable development in Namibia.³⁵ While the Environmental Assessment Policy is non-binding, it does delineate all parts of the EIA procedure from project submission to approval, implementation, monitoring, and auditing, and in this way serves as a guide for EIA review.³⁶

In 2000, when the MET still had not created the position of Environmental Commissioner, the MME and the MET came to an agreement regarding the role of the Directorate of Environmental Affairs (DEA) in reviewing prospecting and mining license applications before issuance of any such license by the MME.³⁷ In order to receive a prospecting or mining license now, environmental clearance must be sought through the submission of a completed environmental questionnaire to the DEA. Most often, the DEA will require a separate environmental impact assessment (EIA), in addition to the one required by the MME. After the EIA has been conducted and approved, an environmental management plan (EMP) must be designed and implemented to ensure the use of best practices. Once the DEA provides environmental clearance, the EPL holder is responsible for submitting bi-annual reports to the DEA on all operations within the prior six months.³⁸

After Independence, no official environmental legislation was enacted to specifically address mining within protected lands. The **Nature Conservation Ordinance of 1975** provides that no person may enter or reside in a game park or nature reserve without the permission of the MET, and states that “no person shall without the written permission of the Executive Committee . . . willfully or negligently cause . . . any damage to any object of geological, ethnological, archaeological, historical or other scientific interest within a game park or a nature reserve.”³⁹ From this language, it appears that there is no barrier precluding the MET, in accordance with the Environmental Policy and its agreement with the MME, from legally granting permission to companies to mine in protected lands.

In the absence of any laws regulating prospecting and mining in protected lands, and with the increase of such activity, the **Policy for Prospecting and Mining in Protected Areas and National Monuments (1999)** (Mining Policy) was established. The Government of Namibia has not adopted the Mining Policy, but the MET, MME, and the National Monuments Council have informally accepted it.⁴⁰ The policy does not prohibit mining in protected areas, but does recommend that any permitted prospecting and mining be in the national interest of Namibia in accordance with the Minerals Act of 1992. Although the MET reviews the companies' credentials and makes a case-by-case decision on the EIA/EMP requirement, the final decision to grant the license, after MET approval, rests with the MME.

In addition to the Mining Policy, the MME created the **Minerals Policy (2004)** in part to “ensure compliance with national environmental policy and other relevant policies to develop a sustainable mining industry.”⁴¹ While it,

²⁹ The MRC was created to include MET participation in the application review process, since the Minerals Act did not do so. The MRC includes representatives from the Chamber of Mines, the MME, the MET, and the Geological Survey. Mansfeld at 94.

³⁰ *Id.*, section 50(f).

³¹ *Id.*, section 50(g).

³² *Id.*, section 52(2).

³³ Environmental Assessment Policy (1994) (Nam.).

³⁴ *Id.*, Appendix B.

³⁵ *Id.*

³⁶ *Id.*, Appendix A.

³⁷ Mansfeld at 94.

³⁸ *Id.*, 51.

³⁹ Nature Conservation Ordinance, section 18 (1975) (Nam.).

⁴⁰ Mansfeld at 108.

⁴¹ Minerals Policy section 1.6 (2004) (Nam.).

like the other policies in place, has no legal weight of its own, the Minerals Policy calls for compliance with existing economic and environmental regulatory frameworks when mining within protected areas. Furthermore, the policy highlights the importance of the EIA process, recommends that rehabilitation be guaranteed when mining in protected lands, and specifies the development of a Final Mine Closure Plan and funding mechanism in an EMP before any mining or prospecting activity commences on any lands.⁴² The Minerals Policy encourages greater MME and MET coordination and serves as a non-binding guideline for the MME to ensure better environmental practices.⁴³

In 2007, Parliament passed the **Environmental Management Act** (EMA). The principles of the EMA include, but are not limited to, promoting community involvement in the management and benefit-sharing of natural resources, promoting public participation in decisions affecting the environment, requiring EIAs for all activities that may affect the environment, requiring those who create waste and pollution to use the best possible practices for reducing the waste or pollution including any associated costs, and taking the necessary precautions to prevent environmental damage.⁴⁴

Pursuant to the EMA, the Minister of Environment and Tourism may appoint an Environmental Commissioner and Deputy Environmental Commissioner. It will be the Environmental Commissioner's function and duty to:

- a. Advise Government bodies on the preparation of environmental plans
- b. Receive and record all applications for environmental clearance certificates
- c. Determine whether or not a particular listed activity requires an environmental assessment
- d. Determine the scope, procedure, and methods for particular types of environmental assessments
- e. Review environmental assessment reports
- f. Issue environmental clearance certificates
- g. Maintain a register of all environmental assessments
- h. Maintain a register of all environmental clearance certificates
- i. Conduct inspections to monitor compliance with the EMA
- j. Perform any other functions assigned by the Minister of Environment and Tourism⁴⁵

When an Environmental Commissioner is appointed, he or she may delegate, in writing, any of these duties to the Deputy Commissioner or to any organ of state, subject to any specific conditions stipulated by the Commissioner.⁴⁶ The EMA will mandate that the MET determine what environmentally harmful activities should not be undertaken without completing an EIA, and publish a list of those activities in the *Government Gazette*.⁴⁷ Any person or company who wants to carry out a listed activity, for example, mining or other extraction of natural resources, will have to fill out an application and submit it to the competent authority, which for mining would be the MME. The competent authority will then forward the application to the Environmental Commissioner for approval. Upon review of the application, the Commissioner will decide whether an EIA will be required. If an EIA is required, the applicant will have to submit an assessment report to the Commissioner, and the same report will have to be made available to all interested parties through proper notification.⁴⁸ The minimum content of the EIA report will be set by regulations attuned with the EMA. Relevant information may include a description of the proposed project, the potentially affected environment, the potential environmental impact, the effects on cultural heritage, any mitigation measures, how the predictions in the report were made, gaps in knowledge, steps taken to consult affected persons, plans for monitoring and managing environmental impacts, and measures for restoring the environment.⁴⁹

The Environmental Commissioner will then review the EIA and consult outside expertise if necessary before making a final decision to grant the environmental clearance certificate. All decisions regarding environmental clearance certificates and on whether any assessments will be required will be memorialized in a written record by the Environmental Commissioner. This Record of Decision (ROD) will have to be available for public inspection at the Office of the Environmental Commissioner.⁵⁰

The **Parks and Wildlife Management Bill of 2008** (Parks Bill), although still a work in progress, aims "to provide a regulatory framework for the protection, conservation, and rehabilitation of species and ecosystems, the sustainable use and sustainable management of indigenous biological resources, and the management of protected areas, in order to conserve biodiversity and in order to contribute to national development."⁵¹

⁴² *Id.*, sections 2.2.4-2.2.5.

⁴³ *Id.*, section 2.3.4

⁴⁴ Ministry of Environment and Tourism of Namibia, Guide to the Environmental Management Act, No. 7 of 2007 8-13 (2008).

⁴⁵ Environmental Management Act, No. 7, section 17(2)(a)-(j) (2007) (Nam.).

⁴⁶ *Id.*, section 49.

⁴⁷ *Id.*, sections 27(1)-(3).

⁴⁸ *Id.*, sections 35(6)-(8).

⁴⁹ Guide to EMA 38-40 (2008).

⁵⁰ Environmental Management Act, section 38.

⁵¹ Parks and Wildlife Management Bill, Preamble (2008) (Nam.).

More specifically, the Parks Bill proposes legal criteria for identifying and declaring an area a protected land, which no other Namibian legislation addresses. In its current form, the Bill classifies State protected lands as any National Park, Nature Reserve, Sites of Special Conservation or Scientific Importance, Protected Landscapes, and any Managed Resource Protected Areas.⁵² In addition, private owners may enter contractual agreements classifying all or part of any privately owned land (also known as “freehold” land) as protected land, with the exception of a national park. If the Parks Bill is passed, any area previously identified as protected land will be reclassified and placed in one of the categories specified in the Parks Bill.

In addition, the Parks Bill allows the MET and MME to agree that certain areas within protected lands will not be available for mining. Such areas would include ecologically sensitive areas, areas with unique or high biodiversity, animal breeding grounds, and areas with other existing or potential economic value.⁵³ Apart from these “no go” areas, mining within protected lands would only be permitted with written authorization from the Minister of the MET, and no mining of dimension stone could ever be authorized.⁵⁴ An applicant for a mining permit within a protected land would also be required to pay a fee to the MET, provide an EIA, an EMP, a rehabilitation plan, and a rehabilitation fee in accordance with the EMA. If permission is granted to mine, the MET would have the right to carry out any inspections necessary to ensure compliance with the Parks Bill.

Finally, the Parks Bill sets forth regulations specific to mining within State protected lands. The Bill specifies requirements regarding biannual environmental reports, annual audits, environmental management plans, changes in company name and ownership, rehabilitation, overburdens, and closure.

3.3 PROBLEMS WITH THE CURRENT LEGAL FRAMEWORK AND THE RESPONSIBILITIES OF RELEVANT MINISTRIES

Current problems with Namibia's regulation of mining include overlapping jurisdiction between ministries, a lack of legal authority for the MET's role in the licensing process, a lack of transparency, and application requirements that are easier for corporate applicants than individuals. While the EMA and Parks Bill are supposed to address some of these issues, these soon-to-be laws also have their own flaws.

Historically, mining has been the province of the MME, acting as both a licensing authority and environmental regulator. Specifically, the MME's mission is to “promot[e], facilitat[e] and regulat[e] the responsible development and sustainable utilization of Namibia's mineral, geological and energy resources through competent staff, innovation, research and stakeholder collaboration in a conducive environment for the benefit of all Namibians.”⁵⁵

The mission of ensuring proper environmental management also falls within the mandate of the MET. The MET's mission is “to maintain and rehabilitate essential ecological processes and life-support systems, to conserve biological diversity and to ensure that the utilization of natural resources is sustainable for the benefit of all Namibians, both present and future, as well as the international community, as provided for in the Constitution.”⁵⁶ The MET and the directorates under its auspices are also charged with monitoring the environmental assessment process in mining license applications.

Not surprisingly, institutional conflicts between the two agencies have arisen frequently, especially in the context of mining in protected areas. The various policies enacted by the ministries were supposed to remedy some of these conflicts, but since these policies are not legally binding, they have had little effect on overlapping jurisdictions and competing regulatory activities. As noted in the 2004 Minerals Policy:

There is little effective environmental management within the Namibian mining industry. This is the result of inadequate co-ordination between the MME and the MET in relation to environmental legislation; a lack of public awareness, capacity weaknesses and education programs focused on environmental issues; the absence of an environmental budget, and the public antagonism towards mining activities because of its negative effects on the environment. The problem is compounded by the fragmentation of environmental capacity throughout the various Government Ministries.⁵⁷

⁵² *Id.*, sections 17(1)(a)-(d).

⁵³ *Id.*, section 25(1).

⁵⁴ *Id.*, section 25(3).

⁵⁵ Ministry of Mines and Energy of Namibia, Mission Statement, *available at* <http://www.mme.gov.na/about.htm>.

⁵⁶ Ministry of Environment and Tourism, Mission Statement, *available at* <http://www.met.gov.na/introduction.htm>.

⁵⁷ The Minerals Policy of Namibia “sets out guiding principles and direction while communicating the values of the Namibian people in pursuit of the development of the mining sector.” This document, which is not legally enforceable, has been intermittently revised since 1994.

One of the few attempts to resolve this lack of coordination occurred when the MME agreed to include the DEA in the environmental clearance process, as discussed above. Such agreements should not be necessary; the Minerals Act should have been amended to give the DEA a formal role in the EIA review process.

In addition, the Minerals Act does not provide for transparency in the mineral licensing process. To the contrary, the Act contains specific language that discourages it. Section 6 calls for the preservation of secrecy by the MME of all matters pertaining to compliance with the provisions of the Minerals Act. This cloak protects the mining companies and inhibits public awareness and participation in decision-making relating to prospecting and mining operations. Through the MET, however, the public can gain access to some records, including those of a company's EIA/EMP compliance, environmental clearance status, and biannual reports.

Finally, the Minerals Act currently only requires information on the previous convictions of individuals applying for NEPLs and Mining Claims; corporations are entirely exempt from any background checks. In a globalized economy, this gaping hole creates an incentive for companies with histories of poor environmental performance to seek licenses in Namibia where their records will not be subject to public scrutiny in any way. In this way, the Minerals Act seems to create a perverse incentive for the country: it attracts precisely the type of unscrupulous companies that the country should be avoiding due to the unnecessary risks to the environment, wildlife, and eco-tourism that such companies might present.

To address this lack of transparency and the existing institutional tensions, recent efforts have been made to rationalize the licensing and regulatory system, clarify roles, and fill policy and enforcement gaps. Most recently, the Government passed the **Environmental Management Act of 2007** (EMA), described above, which creates a new Environmental Commissioner responsible for monitoring and coordinating environmental assessments processes, maintaining a register of environmental assessment plans, providing public notification, ensuring the availability of any EIAs submitted in relation to prospecting and mining licenses, and conducting inspections to monitor compliance.⁵⁸ Although the EMA is a step in the right direction, the Namibian Government has yet to establish the regulations necessary for its implementation, and therefore it is not currently being enforced.

Furthermore, while the Parks Bill will provide additional safeguards for mining within protected lands, that Bill, as it reads today, *will not legally ban mining within protected lands*. In fact, as described above, the Parks Bill authorizes the MET and the MME to work together, with a substantial amount of discretion provided to the Minister of the MET to permit mining within State protected lands. Provisions for public participation in the mining permitting process are limited to EMA requirements and the development of a National Conservation Advisory Board. The Board is to be made up of six to twelve individuals representing the public of Namibia with the purpose of advising "the Minister [of the MET] on policy, management and development issues related to the conservation of biological diversity and the management of State Protected Areas in Namibia."⁵⁹ In addition, the Parks Bill has strong language authorizing Government officers to search, seize, arrest, and detain individuals, without a warrant, for reasonable suspicion of non-compliance with the Bill.⁶⁰ This language appears to directly conflict with judicial interpretations of the Namibian constitutional rights regarding arrest, detention, and privacy.⁶¹ In light of such language and easily surmounted prohibitions regarding mining within protected lands, the Parks Bill requires a number of amendments before it should be presented to Parliament for consideration.

3.4 ENFORCEMENT PROBLEMS IN PERMITTING PROCESS

As is clear from the review above, the regulatory structure applicable to prospecting and mining is woefully inadequate. In addition to the critical need for increased protections, the Government is not enforcing the laws that are already in place.

In particular, companies have been allowed to begin prospecting and mining activities without completing all necessary steps in the permitting process. For example, in 2003, as part of an application for an EPL, Nambib Mineral Resources (Nambib) submitted an EIA that did not meet the minimum Ministry requirements in that it claimed it would achieve impossible levels of environmental rehabilitation of visual tracks and scars.⁶² But Nambib nevertheless received the EPLs and continued to prospect for several years.

Similarly, in 2002, the Northern Namibian Development Company (NNDC) was granted an EPL in the Skeleton Coast Park a full year before an EIA and a poor EMP were submitted to the DEA. As a result, there was no workable EMP in place with which to monitor and audit environmental impact from prospecting nor was there any record of biannual reports filed with the DEA.⁶³

⁵⁸ Environmental Management Act.

⁵⁹ Parks and Wildlife Management Bill, section 15.

⁶⁰ *Id.*, section 9.

⁶¹ Constitution of the Republic of Namibia, art. 11 and art. 13.

⁶² Mansfeld at 53.

⁶³ *Id.*

Even worse from an enforcement perspective, Smartis Diamond Recoveries received an EPL in 2002 without ever receiving an environmental clearance. Smartis's declared reason for proceeding without a clearance – that the company wanted “to know if there [were] any diamonds in the area before [spending] a rather huge sum of money” – illustrates how mining companies place more importance on their own investments than on compliance with the law.⁶⁴

Moreover, even when the letter of the law is followed, mining companies sometimes do not engage in the permitting process in good faith. For example, in 2005, a small Australian mining company named Paladin Energy Ltd submitted the proposal for the Langer Heinrich Uranium project, located in the Namib Naukluft Park. Paladin Energy did not have corporate standards regarding environmental assessments, and used an inexperienced company to develop the EIA, which resulted in a lax EIA process. The mining license was awarded before the concerns raised in the public participation sessions (principally about water usage) had been adequately addressed.

These enforcement problems often stem from a process that is slow, inefficient, and occasionally tainted by corruption. These flaws leave the door open to environmental abuse, and at the same time discourage responsible investment. Well-intentioned companies shy away from the unclear, slow regulatory process, and instead invest in projects in other countries in the region. Thus, the poor regulatory environment deprives Namibia of both environmental protection and investment – the worst of all possible worlds.

For example, industry sources say that as recently as 2003, when a company would apply for an EPL in a park, upper level MME officials would refuse to issue the EPL, citing the park's protected status. However, this excuse was contradicted by officials issuing licenses to their political associates or to outside groups willing to bribe them often for more invasive types of mineral prospecting.

The MET, meanwhile, adopted a policy of non-cooperation, refusing to review any EIAs submitted to them, or even to sit down and meet with companies interested in mining in protected areas. This non-cooperation was, in part, an attempt to limit the power of corrupt officials within the MME to approve illegal EPLs (the MET by this time had the power to prevent mining in protected areas as a result of the informal agreement reached in 2000). But the non-cooperation also resulted from poor information flow within the MET; local officials would tell their supervisors an area was in pristine condition, despite the fact that prospecting and mining had previously taken place with no subsequent remediation. Based on such false assumptions about the nature of the environment, the MET would vigorously oppose all attempts to mine in protected areas.

Mining companies bypassed the corrupt MME officials or the unyielding MET personnel by appealing directly to the Ministers themselves. This was effective in forcing the ministries to act, and also helped ensure that future EPL applications or conversions to mining licenses would be reviewed and approved expeditiously. At times, this created the incentive for mining companies to bypass the process ruled by law and formal policy, and instead to use political and personal connections. This had the effect of degrading the importance of legal standards and requirements, and removed the few mechanisms in place intended to help the country distinguish between good and bad mining companies. If a company with poor environmental practices and inadequate qualifications did not acquire a license through outright bribery, they could nonetheless use their political influence to put pressure on the ministry staff to approve their application.

Administrative delays as a result of understaffing also contributed to an uncertain regulatory environment for renewal EPL applications. The Minerals Act requires companies to apply for renewal EPLs 90 days before expiration of the original three-year period. The MET would often sit on such applications for extended periods of time, occasionally returning decisions up to three years later. Mining companies were able to continue operations despite the lack of MET approval because of a loophole that creates the presumption that mining companies seeking renewal of EPLs complied with the law during the initial period, unless the MET had indicated otherwise.⁶⁵ Because the MET would not issue either an approval or rejection for years, this left mining companies in legal limbo, investing large sums of money based on an uncertain right to prospect exclusively. This situation could continue for long periods of time, leading to absurd results. For instance, because renewal EPLs only last for two years, an approval issued after three years would come well after the first renewal period had already concluded, and in the middle of a second renewal based on a non-existent first renewal.

Such practices created additional opportunities for corruption. When a company determined, after extensive investment and exploration, that an EPL area was mineral enriched and of high profit potential, the company would apply for an EPL renewal at least 90 days before its current EPL expired. Taking advantage of the fact that decisions on renewal applications were often delayed, crooked companies in collusion with corrupt officials, would look at renewal applications in advance of their expiration dates to see which ones were particularly promising. When the original EPL expired, the crooked company would then immediately apply for their own initial EPL, even while the original company continued to prospect. As a result, the second company would profit from any minerals discovered using the illegal EPL. Fortunately, the original company could usually vindicate its claims through legal or administrative challenges, but the mere fact that they had to be vigilant against such schemes contributed to a poor business climate.

⁶⁴ *Id.*, 56.

⁶⁵ Minerals Act, section 71(3)(a).

Even if there were no problems with corruption, extended delays in Government action still jeopardized the law's environmental protections. After all, a company could engage in seriously destructive environmental practices during the initial period, apply for a renewal EPL, and then continue the same practices for several more years before finally having their license retroactively revoked.

Although some of these problems have been remedied recently, many still remain. The MME is better staffed at present than it has been in the past, but it still lacks any personnel with legal training, and requests to the Ministry of Justice to assign one of their lawyers to MME have been rebuffed. The MET also remains understaffed, and does not have nearly enough personnel to monitor the vast expanses of protected land around the country. Furthermore, officials both in the MME and MET lack the necessary technical skills and training to effectively review EIAs submitted by the mining industry. One of the solutions to this last problem has been for ministries to hire environmental consultants, but these consultants are often the same people hired by the mining industry to draft companies' EIAs in the first place, leading to serious conflicts of interest.

Despite these problems, mining projects with good environmental practices do exist, but they depend on company initiative. For example, Anglo Base Skorpion Zinc, located near the Sperrgebiet Park, used a reputable company to conduct the EIA, commissioned a wide range of expert studies, and executed a comprehensive public participation process. Even though the Sperrgebiet had not yet been declared a protected area during the environmental review, their consultant nevertheless incorporated the area's unique environment and potential for tourism and conservation when conducting the EIA. The success of this project was acknowledged in 2003, when the Skorpion Zinc Project was awarded the National Premium Award by the International Association for Impact Assessment for excellence in environmental management.

Similarly, the EIAs commissioned by Namdeb for projects at Pocket Beaches and Elizabeth Bay have been well executed. It seems clear from these examples that motivated companies with clear long-term business plans or interests seem able to complete and even exceed current environmental standards without much difficulty.

Initiative like this is usually a result of the company's choice to adhere to international best practices in order to protect their international reputation. While large companies like Anglo Base willingly adhere to local laws, they seem little concerned with them, because their internal standards are usually much higher. For better or worse, Namibia's law does not seem to constrain the industry much. Unfortunately, this also allows for other mining companies who lack the same initiative to operate under minimal regulation and monitoring.

In addition to problems with Government enforcement of permitting requirements, there remains the even more concerning problem of mining companies operating entirely without any permits. Unlicensed, and therefore illegal, mineral exploration and mining operations are taking place in remote sections of protected areas, undisturbed by law enforcement oversight. More investigations and patrols are needed to make sure that all mining companies go through the permitting process before starting excavations.

Mining Activities and Adverse Impacts on Namibian Protected Areas

4.1 ADVERSE ENVIRONMENTAL IMPACTS OF MINING OPERATIONS

Whether as a result of the inadequate regulatory structure, agency conflicts, or uneven enforcement, mining operations are threatening the integrity and stability of Namibia's fragile protected lands. The adverse impacts resulting from mining activities range from landscape alteration to soil and water contamination, human and wildlife exposures to toxic materials, water depletion, and loss of habitat for sensitive plant and animal species. Many of these effects are unavoidable by-products of mining activities. For instance, air pollution and visual pollution of pristine vistas necessarily accompany any use of vehicles, the detonation of explosives, or the erection of any structures, even temporary ones.⁶⁶ For example, track scars within the Skeleton Coast Park still remained etched in the earth from prospecting and mining operations of the 1960s. These adverse impacts are particularly visible in ecosystems like those in Namibia, where, like in many desert regions, plants and animals survive by the slimmest of margins and the slightest changes to habitats or destruction of vegetation can have serious implications for species survival.⁶⁷

These impacts may also result in economic losses at the local and national level as mining activities deplete water resources and degrade or destroy potential eco-tourism attractions. Uranium mining is particularly harmful in this regard, since the extraction of uranium oxide from uranium-bearing rock requires huge quantities of water. The Rössing mine, for instance, requires as much as three million cubic meters of water per year. Even though some of this water can be recycled, the mine still requires about one million cubic meters of fresh water every year, which is enough to sustain the informal settlements outside Windhoek, with a population of approximately 28,000 people, for over five years.⁶⁸ Even worse, much of this water becomes tainted with the sulphuric acid that is used to leach the ore from the rock, and winds up in massive tailings ponds. The Namibian uranium sector as a whole used 10 million cubic meters of water in 2008, and projections currently predict that the usage will increase to 64 million cubic meters of water per year by 2015.⁶⁹ Water used in mining operations is currently provided by NamWater, but in a climate like Namibia's, much or all of the additional water will need to come from desalination plants. The first desalination plant is not expected to be operational until 2011.

Because of the low ratio of useful ore to waste rock in uranium mining, uranium mines are also very energy intensive – the enormous trucks used at Rössing consume 2800 litres of diesel every 24 hours, for example, and those are run partly by an electric trolley system. Uranium mines also use large amounts of electricity purchased from NamPower. In 2008, the uranium mining industry consumed 50 megawatts of power, and that number is expected to increase to 280 megawatts in the next five years.⁷⁰ Not all of this power can be generated from renewable resources, resulting in additional pollution from power generation facilities.

Regardless of the type of mining, the environment is also affected upon the conclusion of mining operations when little to no effort is made by mining companies to implement proper closure procedures or to rehabilitate. Even when a company presents a mine closure plan with its license application, there are financial incentives to sell the mine before close of operations and transfer any and all rehabilitation liability to another party. It is not always guaranteed whether the new owners will later implement proper closure and rehabilitation as provided by the original closure plan and in some cases will even use the funds set aside for closure for other purposes. In the past, mining companies have left garbage, abandoned equipment, unused explosives, and other industrial waste behind without financial or criminal consequences. Open pit uranium mining, for instance, often results in deep and wide holes that neither mining companies nor governments can realistically fill after the conclusion of operations. But regardless of the mineral extracted or the method used, the Government, more often than not, has insufficient funds, resources, or information to restore affected areas to their pre-mining condition.

A wide range of Government entities has acknowledged these impacts, including the MME itself. For example, the MME's 1994 Mineral Policy states that "[w]hile mining forms a very important part of the Namibian economy, it also has contributed to major environmental degradation. At present there are over 240 abandoned mine sites where the responsibility for rehabilitation now rests with the State."

⁶⁶ Mansfeld at 71, 79.

⁶⁷ Mansfeld at 83, 85-86.

⁶⁸ Ministry of Environment and Tourism of Namibia, State of the Environment Report: Freshwater Resources, *available at* <http://www.mct.gov.na/programmes/soers/execsummaries/SoEwat1.pdf>.

⁶⁹ A Balancing Act: Introducing the Namibian Environmental Management Act No.7 of 2007 (Mamokobo Video & Research 2008).

⁷⁰ *Id.*

4.2 CURRENT EXTENT OF MINING OPERATIONS

The massive scale on which mining and exploration activities are currently taking place in Namibia also places environmental integrity in jeopardy. Even a brief review of the range of mining permits currently in place across Namibia reveals just how extensive mining activities are and how lax regulation of the industry could lead to massive damage to Namibia's environment.

Both the MME and the CoM provide periodic updates on the locations of all current mineral licenses for all different types of minerals. The most recent versions of these updates are shown in Figures 2 to 7.

When assessed individually, mineral licenses (excluding diamond exploration) generally do not have a large impact on the environment. However, as can be seen from the maps, not only is virtually the entire country allotted for mineral licenses for one mineral or another, but many areas are being explored for more than one commodity. The cumulative impact of all this activity has already significantly affected the environment and will continue to exacerbate existing problems unless adequate management measures are put into place immediately.

Many of the current Nuclear Fuel licenses for uranium mining (see Figure 2) are in protected areas, mainly in the Namib-Naukluft Park, West Coast Recreation Area, Skeleton Coast Park, and Sperrgebiet Park. Freehold land and communal areas are also affected.

Mineral licenses for Precious Stone mining (see Figure 3) extend along the entire coast, both on and offshore. All coastal protected areas are affected, particularly the Sperrgebiet Park, West Coast Recreation Area, and Skeleton Coast Park. A second area is the central and northern Kalahari system in northeast Namibia. The current and pending licenses overlap within the Khaudum, Bwabwata, Mudumu, and Mamili National Parks; the Nyae Nyae conservancy; four other conservancies and five community forests; forests within communal lands in Kavango; and eight conservancies and five community forests in the Caprivi. A number of other license sites occur down the central ridge of Namibia, the most northern cluster of which are in three adjacent conservancies in the Kunene and Omusati regions. The remaining licenses are mainly on freehold land.

The maps of mineral licenses for Base and Rare metals (Figure 4) and Precious Metals (Figure 5) show a concentration of licenses along the escarpment, the central plateau, and the high ground, extending up to Tsumeb/Grootfontein and across into the central Kalahari. There is another cluster east and south of Walvis Bay in the Namib-Naukluft Park and one in the southeastern part of the Sperrgebiet Park. The entire Bwabwata National Park is licensed, as are six conservancies in Otjozondjupa, twelve in Kunene, and two in Omusati.

The licenses for Industrial Minerals such as quartz or fluorspar (Figure 6) are more restricted. They are for mining mainly on freehold land, but are also in the eastern parts of the Sperrgebiet Park, the Namib-Naukluft Park, and the West Coast Recreation Area, as well as on three conservancies in Kunene and three conservancies in Omusati.

Finally, license blocks for Dimension Stones, such as gravels or shaped stones, are found in the eastern Sperrgebiet Park, northern Namib-Naukluft Park, and southern West Coast Recreation Area (Figure 7). Many of the licenses for mining in these parks are pending approval. In view of the relatively low market value of dimension stone, from an economic perspective, it seems highly inappropriate for such licenses to be approved.

4.3 LAYERING FIGURES 2 TO 7 ON EACH OTHER, AS SHOWN IN FIGURE 8, MAKES CLEAR HOW MUCH EXPLORATION ACTIVITY HAS BEEN LICENSED ACROSS THE COUNTRY AND HOW SIGNIFICANT THE CUMULATIVE EFFECTS OF ALL THIS ACTIVITY COULD BE IN SPECIFIC NATIONAL PARKS

The Skeleton Coast Park, Namib-Naukluft National Park, and the Sperrgebiet Park all have active mines and exploration licenses operating within their boundaries. This report focuses on these three national parks as representative examples of the current state of mining in all Namibian protected lands. The locations of these three parks are illustrated in Figure 1.

These case studies describe the history of each park in brief, review the current status of each park's management plan, and discuss the mining operations recently authorized for the park and the licenses that are currently in effect.

4.3.1 The Skeleton Coast Park

In 1907, while still under German colonial rule, Namibia (then called German Southwest Africa) proclaimed the Skeleton Coast Park as Game Reserve No 2. In 1973, the area was titled the Skeleton Coast Park, in accordance with the Nature Conservation Ordinance of 1975. During the Park's early years, the South African Government allowed mining and prospecting in the Park, but by 1983 all prospecting and mining had ceased.⁷¹ At that time, the Park converted the old mining camps into tourism or conservation nodes and engaged in significant rehabilitation work. In 2000, post-independence, the Government once again made the area available for prospecting and mining.⁷²

⁷¹ Mansfeld at 42.

⁷² *Id.*

4.3.1.1 Mining Activities within the Skeleton Coast Park

According to review of maps of licenses published by the MME, by 2005 26 prospecting licenses had been issued within the Skeleton Coast Park with only 10 EPLs being actively used. Currently, only two companies hold valid prospecting and mining licenses in the Skeleton Coast Park, and four companies have pending prospecting licenses. Petunia Investments is the only company holding two valid EPLs, while Namura Minerals Resources, Songai Mining, Metals Namibia, and Igneous Mining Project have pending EPLs. Igneous Mining, which extracts amethyst and quartz crystals from a series of quarries in the area, currently holds the only mining license.

4.3.2 Namib-Naukluft Park

Portions of Namib-Naukluft Park (NNP) first became a protected area in 1907, but it was not until 1979 that it began to take its present shape when it incorporated the northeastern portion of Diamond Area No. 2 (DA2), an area that had been closed to the public and reserved for diamond mining.⁷³ In 1986, the boundaries of the Namib-Naukluft Park were again expanded, this time to incorporate the remainder of Diamond Area No. 2 and a portion of Diamond Area No. 1. Today, the Namib-Naukluft Park covers an area of approximately 50,000 km² and is reputed to be the third largest park in Africa.⁷⁴

In 2008, the dune field between Walvis Bay and Swakopmund, and the West Coast Recreational Area were also proclaimed national parks. At present, it is unclear if these areas will be incorporated into the NNP or given independent national park status.

4.3.2.1 Mining Activities within NNP

According to lists published by the MME in April 2009, there are twenty-one active EPLs, sixteen pending EPLs, and four active mining licenses, for a total of forty-one licenses. There are twenty-two different holders of these licenses, though ten companies own twenty-five of the licenses. Cheetah Minerals Exploration, Namura Minerals Resources, Nova Energy, and Reptile Uranium Namibia are the major license holders. The active mining licenses are permits for uranium extraction.

4.3.3 The Sperrgebiet Park

The Sperrgebiet Park, also known as the “Forbidden Territory,” encompasses some 26,000 km² in southwestern Namibia. After the first diamond was discovered near Kolmanskop in 1908, sole prospecting and mining rights were granted from the Orange River to just north of Lüderitz, and extending 100 km inland from the coast. Although diamond mining was confined to the coastline and the Orange River, general public access to the entire licensed area was prohibited except on issuance of a special permit. This area became known as the Sperrgebiet, and the fact that the area was conserved as an almost pristine wilderness was and remains a product of security around diamond mining operations rather than one of deliberate conservation efforts. In the early 2000s, large areas of the Sperrgebiet Park were de-proclaimed from exclusive prospecting and mining licenses and the land reverted to unproclaimed State Land, meaning that the land was not allocated for use by any one party. The Sperrgebiet is one of the few areas within the Succulent Karoo Biome (a biome that has been identified as a global biodiversity ‘hotspot’) that retains its original primary vegetation. It was therefore identified as a critical area for formal conservation efforts. In 2001, a land use plan was developed and a process initiated to have the area formally proclaimed a protected area. This vision was realized on December 1, 2009, when the area was proclaimed a national park.⁷⁵

4.3.3.1 Mining Activities within Sperrgebiet

There are currently twenty-two active EPLs in the Sperrgebiet, two pending EPLs, and five mining licenses, for a total of twenty-nine licenses. There are eleven license holders, though four companies hold sixteen of the twenty-nine total licenses, and one company, Namdeb, owns all of the mining licenses. Besides Namdeb, the other dominant companies are Pegmatite Diamond and Fishing, and Risk-Based Solutions.

⁷³ Ministry of Environment and Tourism of Namibia, Strengthening the Protected Area Network Project (SPAN), Sandpaper, Namib Naukluft Park (2007).

⁷⁴ *Id.*

⁷⁵ Ministry of Environment and Tourism of Namibia, Strengthening the Protected Area Network Project (SPAN), Sandpaper, Sperrgebiet Special Edition 14 (2008).

International Best Practices

As Namibia continues to restructure its prospecting and mining policies, the Government should consider some of the best practices recommended by scientific experts working around the world. The following policy prescriptions fall into a three-step process that the Government could use when crafting its own best practices model:

1. Determine what protected lands, if any, will be open to mining.
2. Specify how companies are to incorporate information regarding the full extent of environmental, wildlife, human, and economic damage that specific mining projects will cause into the process of evaluating specific mining projects.
3. Establish and implement governance procedures to apply to any projects that are able to meet the stringent environmental requirements for mining in protected lands.

The following section presents the international best practices that the Namibian Government should consider in each phase of its implementation process. These recommendations represent a synthesis of the opinions of a wide and inclusive range of international bodies, governments, and non-governmental organizations. These institutions include, but are not limited to, the World Resources Institute (WRI), the World Conservation Union (IUCN), the International Convention on Wetlands (Ramsar Convention), the World Bank (WB), the Center for Science in Public Participation (CSP²), the International Institute for Environment and Development (IIED), and the World Placer Journal. The selected recommendations were included for their relevance to the political, economic, and social circumstances of Namibia.

5.1 DETERMINING WHERE MINING CAN TAKE PLACE

- **Establish areas where no mining activity of any sort will ever take place**

Almost every expert consulted for this report agreed that countries should declare certain lands to be completely free of mining activity in the interests of preserving delicate ecosystems and critical habitat areas for endangered species. The World Conservation Union (IUCN) has created a widely accepted framework for categorizing lands based on their environmental value that may be helpful when Government agencies try to determine which areas should be considered completely off limits. Mining should not take place in areas included in classifications I-IV of the list below.

IUCN Management Category	Primary objective
Ia – Strict Nature Reserve	Scientific Research
Ib – Wilderness Area	Wilderness Protection
II – National Park	Ecosystem Protection and recreation
III – Natural Monument	Conservation of specific natural features
IV – Habitat/ Species Management Area	Conservation through management intervention
V – Protected Landscape/Seascape	Landscape/seascape for conservation and recreation
VI – Managed Resource Protected Area	Sustainable use of natural ecosystems

- **Establish graduated areas of protection, in which lands with decreasing amounts of ecological sensitivity receive proportionately less protection**

This policy recommendation is designed to balance the country's economic need for mining with its need to ensure environmental integrity of the land. Thus, mining may be allowed in some sensitive lands that do not merit full off-limits protection, albeit with increased environmental safeguards. Additionally, while mining may be allowed in some lands, certain specific mining practices might be deemed impermissible regardless of any safeguards used. An example of this latter category would be lands adjoining national parks and wilderness areas, where underground hard-rock mining should be forbidden because of the severe risks of subsidence and inherently unknowable hydrological impacts.

5.2 ASSESSING EXTENT OF POTENTIAL ENVIRONMENTAL DAMAGE

- **Assume that there will be adverse impacts until proven otherwise**
 Extractive industries like mining are inherently destructive processes. When assessing the environmental impact of a mining company's activities, the burden should rest with the mining company to prove that the proposed activity will not harm the environment or that any environmental damage will be remediated to the satisfaction of the Government and other stakeholders.
- **Require an additional environmental assessment for biological “hot spots” or critical habitats**
 This requirement would raise the standard of proof for mining companies attempting to disprove the presumption of environmental harm. So, in areas that do not merit off-limits protection but nevertheless qualify as areas of critical habitat, mining companies would have to satisfy heightened EIA requirements to receive approval for requested permits.
- **Require environmental impact assessments to be conducted by known, reputable consultants**
 One difficulty with the reliability of assessments arises when consultants exploit vague national or international environmental assessment standards to declare a proposed activity safe. More conscientious consultants who use sound methodologies have difficulty competing for business with such unscrupulous businesses. Government policy should ensure that competent consultants compete on a level playing field. The institutionalization of formal background checks on consultants with an eye toward evaluating their degree of compliance with environmental assessment guidelines and other standards would go a long way toward leveling the playing field among the different consulting businesses, and would also help to ensure that the assessments completed would be reliable.
- **Collect adequate baseline data**
 When exploring a protected area for mining, it is very important that the information collected for use in decision-making be accurate and reliable. Examples of such data include surface and groundwater quality, existing wildlife, the presence and health of aquatic organisms, and geographic and meteorological data. All parties stand to lose when inadequate data is relied upon, especially when the data affects social and economic considerations. Requiring thorough documentation of the topography and plant and animal life, while utilizing photos and maps, may be helpful.
- **Identify all lifecycle costs in the environmental impact assessment including the costs of reclamation, closure, waste treatment and disposal, post-closure monitoring, maintenance, and human and wildlife exposures and treatment**
 These costs should take water contamination and usage into account. Assessment of the potential for contamination of surface and ground water should be conducted. For example, impacts on surface and ground water can be assessed through certification by a qualified professional that water treatment, or groundwater pumping, will not be required indefinitely in order to meet the law's surface or groundwater quality standards beyond the boundary of the mine. In addition, minimized water usage should be adopted as a goal.
 Costs regarding acid mine drainage and air quality should also be identified. Companies should conduct supervised adequate pre-mine sampling and analysis for acid-producing minerals and assess the potential for airborne hazardous emissions. These reports should be passed on to the proper directorates in the ministries to undertake a technical analysis.
- **Submit environmental impact assessments to independent third party experts for review**
 One way to help ensure that only reputable consultants are used is to submit EIAs to external expert evaluation. This review would create accountability for the consultants, and provide the Government with critical help in evaluating the methodology and assessing the reliability of EIAs. Making the results of this independent analysis public would provide yet another layer of protection, and prevent the reviewing bodies from being influenced by the views of those whose work they are charged with scrutinizing.
- **Create an alert list of stakeholders to be notified when EIA documents and expert evaluations of EIAs are available**
 To increase transparency in the application and permitting processes and incorporate as much community involvement in the process as possible, the permitting agency should create a list of groups and individuals who will be notified when EIA reports are completed. Such groups could include Government entities, NGOs,

donor agencies, scientific bodies, and other civil society groups. The permitting agency should also notify these same groups when the expert analysis of the EIA is complete. After notification, interested groups and individuals should be able to access these reports electronically (and companies should be encouraged to make their EIA reports available in an electronic format) or gather printed copies made available for free by the permitting agency.

- **Ensure assessments include the “real” costs of mining operations**

When determining whether to allow mining, and if so how much revenue it deserves from the mining company, the Government of Namibia will want to take into account the true full costs of a mining project, including all immediate, secondary and remote costs. Immediate costs would include the loss of biodiversity due to mining operations (e.g., personnel, machinery, noise, etc.) or the forced relocation of specific endemic species. Secondary costs might include the loss in value of grazing lands that have been destroyed, the costs associated with reduced productivity from forced overgrazing on other remaining grazing lands, and the long term costs of replicating functions provided by currently viable ecosystems (like flood protection provided by wetlands). Long-term costs would include those attributable to mine closure and site remediation, waste treatment and disposal, water testing and treatment for surface and groundwater, post-closure monitoring and maintenance, and evaluation of human and wildlife exposures and treatment.

5.3 ESTABLISHING GOOD GOVERNANCE & IMPLEMENTATION PROCEDURES

- **Projects should benefit all affected local groups, including women, ethnic minorities, and the poor**

Revenues received from mining operations should be shared with affected communities as well as national or regional governments. Women, ethnic minorities, and poor persons should not be discriminated against when determining revenue distribution. To ensure that the sharing process is fair, best practices require an open, public planning process for use of the revenues.

- **Ensure extractive rents are negotiated to maximize benefits, which can be used to support more value-added and labour-intensive sectors**

Deals should be negotiated to maximize the benefits the Government receives through extractive rents. Non-governmental organizations or other independent consultants can assist with such negotiations. Extractive rents or bonds can be used to cover the costs associated with a proposed mining project. In addition, extractive rents can be reinvested in other non-mining, labour-intensive sectors that add greater economic value to the country.

- **Project proposals should include a plan for re-contouring and stabilizing disturbed areas**

If Namibia chooses to allow mining on some less ecologically sensitive lands, it should ensure that the mining companies plan for how they will restore the landscape after the conclusion of the mining. This plan should aim to put the landscape in the same condition it was in before the mining began, taking into account the baseline data provided by the environmental impact assessment on flora and fauna. Reclamation should not be considered complete until the ecosystem is completely functional and self-regenerating.

The plan should make provision for the storing of topsoil and other growth media while mining is taking place and returning that topsoil to the ground afterwards. This storage and return is particularly important because re-vegetation is much more successful when there is already a layer of organic material in topsoil to provide sustenance to re-vegetated plants. The plan should also include quantitative standards for this re-vegetation, primarily with native species, as well as provisions for the complete collection and proper treatment and disposal of all tailings, chemicals, and other waste products associated with mining operations.

- **Reclamation plans should include plans for post-closure monitoring and maintenance of all mine facilities**

Given the toxicity of many of the chemicals used during mining operations, it will be critical to continually monitor conditions at closed mines for many years after closure. This monitoring should take into account surface and underground mine operations any uncollected tailings, and all waste disposal facilities.

- **Make financial provisions in advance for reclamation, long-term monitoring, and maintenance**

The monitoring and maintenance of closed mines will last a long time, and involve considerable expense. At the same time, though, the activities of companies in the mining industry are inherently unpredictable, since

they are subject to commodity prices that gyrate significantly. Thus, to prevent the Government of Namibia from having to pay for maintenance and monitoring if companies declare bankruptcy, mining companies should be required to make financial provisions in advance for the post-closure phase of a mine's lifespan.

- **Ensure financial sureties are adequate and sufficiently liquid**

When financial guarantees are required, companies have a significant incentive to underestimate the future costs of reclamation. To combat this natural tendency on the part of mining companies, mining laws should provide guidance to the permitting agency as to what level of surety will be deemed adequate. To provide another layer of check, the agency determination should be made available to the public for comment and criticism.

Post-closure funds should be placed in the hands of third parties independent of the company, to make sure the funds will be available when needed. There are several forms of financial surety that would meet this requirement, including performance bonds, cash deposits, and mandatory insurance.

- **Companies should be required to regularly report on their progress and performance towards achieving the results predicted in the environmental impact assessment**

Once a mine has begun operation, the Government of Namibia should ensure that the mining company is following through on what was promised. Governmental auditing and inspection will be essential for this, but the company should also be required to produce its own assessment of its own performance. This information should not be company-wide, but should address performance at each individual site, to help Government officials monitor compliance. Such reports should meet not only the baseline international standards for environmental reporting, but also any additional international and domestic standards proposed for the mining industry specifically.

- **Require polluting mining companies to pay for the costs of clean-up**

Somewhat surprisingly, laws that require polluters to pay or reimburse the state for paying for clean-up costs are somewhat rare. In those few countries that do require polluters to pay, the fines are often not equal to the costs of clean-up; this leaves the polluter with an incentive to pollute, especially when the polluter earns an additional profit over costs by polluting. The Government of Namibia should require mining companies that violate environmental laws to pay penalties that cover all of the costs of remedying the pollution. The Government of Namibia should make sure that these fines fully capture all associated costs.

- **Create a law on sale of mines making new owners responsible for restoration of lands unrestored by prior mine owners**

One frequent problem in the mining industry involves mining companies promising to restore lands when opening a mine but subsequently selling it to another company and dodging the requirement of restoration. To prevent this from happening, Namibian law should ensure that the *current* owner of a mine is liable for restoration costs, even the remediation costs of areas closed and depleted by the previous owner. No company should be able to avoid the costs of restoration.

International Case Studies

The debate over mining in national parks is not one restricted to Namibia. After describing the context of certain countries, we present potential approaches that Namibia may seek to adopt.

6.1 CANADA

Background

Mining of natural resources is an important part of Canada's economy. Mineral and metals account for over 13% of the nation's export output. Mining is prohibited in all national parks and wildlife sanctuaries but is allowed in other types of protected areas.⁷⁶ Canada produces approximately 34% of the world's uranium, and 20% of the world's uranium comes principally from one province, Saskatchewan. Mining constitutes approximately 20% of Saskatchewan's economy.⁷⁷

Permitted Mining within Protected Areas

In Canada, mining in protected lands is regulated at both the federal and provincial level. The analysis below examines the policies of the Federal Government and that of Saskatchewan province.

- **Federal protected lands**
 - **National Parks.** The lands in the National Park System are protected for public appreciation, recreation, and preservation for future generations. No mining is allowed in national parks. There are no exceptions for pre-existing mining claims. Consequently, if the Government is considering the establishment of new parks, it will redraw park boundaries, ask for voluntary relinquishment of mining claims, ask the provincial government to extinguish the mining claims with compensation to the owners (if the proposed park land is provincial land), or abandon the proposal and create a national park elsewhere.⁷⁸
 - **Migratory Bird Preserves & National Wildlife Areas.** These areas are designed to protect birds and other wildlife from hunting and destruction of habitat. There are no categorical prohibitions on mining in bird and wildlife sanctuaries; proposals are reviewed on a case-by-case basis to determine whether the proposed activity is incompatible with the purpose of the sanctuary. Regulations clearly prohibit disturbing or removing any soil and commercial or industrial activity, and to date almost no mining exploration or extraction has been permitted in any of these areas. In areas proposed for designation as a wildlife area or bird sanctuary, the Government will either request voluntary relinquishment (sometimes with a grant of mining claims on other Government lands), select areas with no existing mining claims, or place strict regulations on the mining activities in the newly designated areas designed to make such activities prohibitively expensive and pressure the mining company to relinquish the claims.⁷⁹
 - **Provincial protected lands.** Lands are protected in Saskatchewan to preserve representative examples of the diverse environmental areas in the province. The provincial government has no uniform policy prohibiting mining in its protected areas; land uses are evaluated on a case-by-case basis, with public input. In most areas, no mining or forestry has been allowed. When selecting areas to create more parks, Saskatchewan usually picks lands that do not already have mining claims or strong development potential for mining. When this is not possible, the province may allow existing mining activity to continue with careful monitoring but prohibit further development.⁸⁰

⁷⁶ John D. Farrington, A Report on Conflict Between Mining and Special Protected Areas in Mongolia with Models for Conflict Resolution from the United States, Canada, and Australia 28-30 (March 2001) (hereinafter "Farrington") (on file with the authors).

⁷⁷ University of Regina, Canadian Plains Research Center, Encyclopedia of Saskatchewan, available at http://esask.uregina.ca/entry/comeco_corporation.html; University of Regina, Canadian Plains Research Center, Encyclopedia of Saskatchewan, available at <http://esask.uregina.ca/entry/mining.html>.

⁷⁸ Farrington at 28.

⁷⁹ *Id.*, 30.

⁸⁰ Ministry of Environment of Saskatchewan, RAN Progress Report 2005 2-3, available at <http://www.publications.gov.sk.ca/details.cfm?p=24507>.

Other Relevant Laws

All mining licenses granted by the provincial government must comply with the federal Environmental Assessment Act, and if the environmental assessment recommends that the operation not proceed, mining is not allowed. However, no mining has been prohibited to date; all environmental problems have been addressed through mitigation.⁸¹

The Federal Government also has the power to direct the provincial government to prohibit a specific mining operation for environmental reasons, though it has committed to do so only after taking the mineral content of the land into account.⁸²

Problems

While Canada's commitment to a complete prohibition on mining in national parks is admirable, this all-or-nothing approach may leave vulnerable lands without any protection at all, since mineral potential is taken into account when creating new protected lands. Additionally, the Government's policy of drawing park boundaries so as to exclude mineral-rich areas could lead to mining operations taking place adjacent to the park land, potentially leading to spill-over effects impacting the park. As a result, while the existing framework of national parks may be completely free of mining, future parks may be more difficult to establish, and the park system may suffer secondary degradation from nearby operations.

6.2 AUSTRALIA

Background

Australia produces vast amounts of minerals yearly, including iron ore, gold, silver, nickel, and uranium.⁸³ In 2004, minerals accounted for 4.1% of Australia's GDP.⁸⁴ Protected areas amount for 11.5% of Australia's total land mass.

Permitted Mining within Protected Areas

The Commonwealth of Australia and the state and territorial governments each regulate the exploration and production of minerals and establishing protected lands. Though the National Government's laws would supersede the state and territorial policies, the Commonwealth has largely deferred to the states and territories, resulting in a highly decentralized regulatory environment. Only 0.3% of Australia's protected national parks are administered on a national level, while there are currently 449 provincially designated and managed national parks and 5600 terrestrial specially protected areas.⁸⁵ The analysis below focuses on protected lands within Western Australia and New South Wales.

- Western Australia has an incredibly permissive protected-area mining policy. Essentially, mining is allowed in all protected areas, though permission is often limited to minerals that are of strategic importance or are of potentially high economic value to the state.⁸⁶
- **National Parks and Nature Reserves.** These lands are protected for wildlife and landscape conservation, scientific study, and for public recreational enjoyment.⁸⁷ Under the Mining Act of 1978, consent from the Department of Mines and Petroleum is required before prospecting is allowed in national parks and nature reserves. Any mining permitted in nature reserves must not conflict with the purposes for designating that area protected. Such identified purposes can only be altered by approval of both provincial Houses of Parliament.⁸⁸
- **State Forests and Timber Reserves.** These lands are protected for the same purposes of national parks and reserves, only on a smaller scale. Mining is only permitted in these areas if it is in accordance with the conditions and restrictions of the Conservation and Land Management Act 1984 (CLMA). The CLMA was established for the protection and management of certain public lands and the waters, flora and fauna therein.

⁸¹ Joan Kuyek, MiningWatch Canada Mines Alert, Canadian Mining Law and the Impacts on Indigenous Peoples Lands and Resources (July 2005), available at http://www.miningwatch.ca/index.php?/Education/Cdn_mining_law.

⁸² Ministry of Natural Resources of Canada, The Minerals and Metals Policy of the Government of Canada: Partnerships for Sustainable Development 15 (1996) (Can.).

⁸³ MBendi Information Services, Mining in Australia Overview, available at <http://www.mbendi.com/indy/ming/au/au/p0005.htm>.

⁸⁴ Australian Bureau of Statistics, Year Book Australia, 2006: A comprehensive source of information about Australia (2007).

⁸⁵ Farrington at 35.

⁸⁶ Farrington at 41.

⁸⁷ Farrington at 37.

⁸⁸ Odile Pouliquen-Young, *Evolution of the system of protected areas in Western Australia*, 24 Environmental Conservation 283, 169 (1996) (hereinafter "Pouliquen-Young").

Ultimately, mining, including prospecting and exploration, may not be carried out on reserved land without the written consent of the responsible Minister. If mining in protected lands is allowed, the mining activities will likely be subject to strict environmental oversight. This will ensure that the purposes for designating an area a public reserve are upheld.⁸⁹

- New South Wales adopted a much stricter policy than Western Australia with regards to mining in protected lands.
- **National Parks and Nature Preserves.** These lands are designated to protect and conserve areas containing outstanding or representative ecosystems, species, and land for public appreciation, inspiration, and recreation. Under the state's National Parks and Wildlife Act of 1974 (NPWA), it is unlawful to prospect or mine for minerals in a national park or nature preserve except as expressly authorized by a provincial Act of Parliament. Though there is an exception allowing for prospecting for minerals on behalf of the Government, this has only been used to perform general geological mapping by state agencies for the public record, rather than for mining purposes.⁹⁰
- **State Conservation Areas.** These areas are established to protect and conserve significant or representative ecosystems, landforms, or places of cultural significance, and to establish areas for sustainable recreation or research. The Minister can grant permission to mine within state conservation areas, but has never done so.

With the state's blanket ban on mining within protected lands and unwillingness to allow exceptions, it is unlikely that mining in protected lands will occur in the near future.

Other Relevant Statutes Governing the Environmental Impacts of Mining

In New South Wales, all or part of any land protected under another law may also be simultaneously designated as a Wilderness Area. Such a designation places further restrictions on the permitted uses of the land. Though the exact restrictions vary, the general purpose of designation as a Wilderness Area is to bind the provincial government legally and monetarily to protect the area in an unmodified state, allow it to evolve free from human interference, and allow for solitude and self-reliant recreation.

According to the Environmental Protection Act of 1986 (EPA) of Western Australia, a proposal that is likely to have a significant effect on the environment may be referred to the Environmental Protection Authority (Authority). Any person can make such a referral. The Authority then has 28 days to determine whether a formal environmental impact assessment is necessary and at what level. After an assessment report has been issued and published, the Minister of Environment and the Minister of Mines, as well as other relevant ministers, may allow implementation of the proposal.

Problems

Since Australia has a decentralized governing system for mining policy, each state and territory may have differing policies regarding mining in protected lands. Since each state government negotiates with individual project developers, problems can arise when other relevant parties are left out of the negotiation process. This indicates that Australia must adopt policies for clear and defined negotiation processes that protect the interests of all relevant persons and communities.⁹¹

Furthermore, because the Commonwealth, states and territories share authority over protected lands, when the different governments' laws differ this can lead to uncertainty over the status of a protected land.⁹² For example, the Commonwealth passed the Environment Protection and Biodiversity Conservation Act, attempting to supersede state and territorial laws and to completely ban mineral exploration and extraction activities in special protected lands unless an exemption is granted. But in April 2002 the provincial government of the Northern Territory declined to bring its laws into accord with the national policy.⁹³ No mining operations have tried to exploit this discrepancy between national and territorial law, so it remains unclear what would happen if a mining company attempted to mine in a national park in the Northern Territory in reliance on the territorial law.

⁸⁹ Farrington at 41.

⁹⁰ Farrington at 40.

⁹¹ Anne Fitzgerald, *Mining Agreements in the Regulation of the Australian Mining Sector*, in International and Comparative Mineral Law and Policy: Trends and Prospects 681, 693 (Elizabeth Bastida, Thomas Wälde, & Janeth Warden-Fernández eds., 2005).

⁹² Department of Foreign Affairs and Trade of Australia, About Australia, Australia's Protected Areas, available at http://www.dfat.gov.au/facts/protected_area.html.

⁹³ The Environment Centre of the Northern Territory, Current Campaigns, Mining in National Parks in the Northern Territory, available at http://www.ecnt.org/html/cur_mining_parks.html.

Additionally, Western Australia faces great public opposition for its lax mineral and exploration policies within public reserves. Minimal security for land possession or the setting up of complicated boundary lines to avoid mining tenements has made mining in protected lands readily available.⁹⁴ Also, in November 2008, the government of Western Australia lifted its ban on uranium mining. This may lead to an influx on uranium mining and may require the state to develop a new effective regulatory framework for mining in protected lands.⁹⁵

6.3 UNITED STATES

Background

As in Namibia, the number of mining claims in the Western United States has risen dramatically in recent years due to increased mineral prices, including a quadrupling of the price of uranium. A 2007 study of mining claims on U.S. federal lands documents a rise from about 200,000 claims at the beginning of 2003 to over 370,000 at the end of 2008. A significant number of these will impact ecologically sensitive areas located within ten kilometres of eleven major national parks.⁹⁶

Permitted Mining within Protected Areas

In addition to the federal designations discussed below, states are free to establish their own categories of protection, and most have substantial state park systems that provide some level of protection. While not insubstantial in size, the size of state parks is dwarfed by the amount of land under federal protection, so this report focuses only on the federal system.

- **BLM and National Forest Lands.** These lands are set aside for conservation, to preserve natural resources for future generations. Administration of these lands proceeds on a “multiple use” mandate that allows some development, including mining, but places some environmental restrictions on the mining operations. Various laws create different requirements for and restrictions on mining for specific minerals.⁹⁷
- **National Wildlife Refuges.** These areas are established to protect the habitat of wild animals and plants. Mining claims in existence when a Wildlife Refuge was established are respected and allowed to continue in operation. While the law theoretically allows for new mining claims when such development would be consistent with the goal of protecting habitat, it is exceedingly difficult to show that wildlife would not be harmed by a proposed operation, so by official policy these lands are largely off limits, except in unusual circumstances. Whether new or pre-existing, any authorized mining must meet stricter environmental standards than those applicable to non-protected lands.
- **National Parks.** These lands are set aside for recreation and preservation for future generations. A 1975 law prohibited the establishment of any new mining claims on lands in the National Park System.⁹⁸ Development of valid claims and patents registered before 1975 was allowed to continue, but subjected to regulations requiring that mining be conducted to prevent and minimize damage, prohibiting the establishment of new roads, and setting strict reclamation requirements.⁹⁹ These environmental regulations are more strict and more strictly enforced than those imposed on non-protected lands, and may be so strict as to allow absolutely no mining activity. In such cases, the National Park Service will buy back the mine owner’s mineral rights, or give the owner a mining claim on unprotected lands of equivalent value to the one being eliminated in the Park System. Even when mining is not prohibited outright, these onerous environmental regulations often make mining in National Parks prohibitively expensive, which leads to voluntary cessation of many mining operations on Park lands. In addition, the National Park System actively tries to phase out unused mining claims, requires the recording of outstanding mining claims within National Park System, and establishes a presumption of abandonment for claims that were not recorded.

⁹⁴ Pouliquen-Young at 177.

⁹⁵ Mining-technology.com, WA Mining Ban Lifted, available at www.mining-technology.com/features/feature49670/.

⁹⁶ Environmental Working Group, U.S. Mining Database: Mining Law Threatens Grand Canyon, other Natural Treasures, available at http://www.ewg.org/sites/mining_google/US/analysis.php.

⁹⁷ Barry Barton, *The History of Mining Law in the US, Canada, New Zealand and Australia, and the Right of Free Entry*, in *International and Comparative Mining Mineral Law and Policy: Trends and Prospects* 643, 646-7 (Elizabeth Bastida, Thomas Wälde, & Janeth Warden-Fernández eds., 2005).

⁹⁸ 16 U.S.C. §§ 1901 *et seq.* (U.S.A.).

⁹⁹ 36 C.F.R. Part 9A (U.S.A.).

- **Wilderness Areas.** Lands within any of the above categories may also be simultaneously designated as Wilderness Areas, which places them almost entirely off limits – no permanent structures or roads are allowed. The Wilderness Act prohibited new mining in Wilderness Areas beginning in 1984. Similar to the law governing National Parks, the Wilderness Act allows claims made before 1983 to continue in operation, provided they are not incompatible with the purpose of the Wilderness Act. To ensure compatibility, agencies with control over Wilderness Areas impose strict environmental regulations, though the precise content of these regulations varies depending on the specific land involved.

Other Relevant Statutes Governing the Environmental Impacts of Mining

Though not specific to U.S. protected areas, four additional environmental statutes warrant mention because they sometimes prevent mining within protected areas: the National Environmental Policy Act (NEPA)¹⁰⁰, the Clean Water Act¹⁰¹, the Clean Air Act¹⁰², and the Endangered Species Act¹⁰³. Each of these has been somewhat effective in halting mining operations in ecologically sensitive areas.¹⁰⁴ NEPA requires environmental assessments and draft and final environmental impact statements to be submitted before actions are taken that would significantly impact the environment. The Clean Water Act makes it unlawful for any person, including mining operations, to discharge pollutants into U.S. waterways without a federal permit. The Clean Air Act establishes air quality standards and empowers states to establish a permitting system to meet these standards. The Endangered Species Act prohibits any person from “taking” any species listed as endangered or threatened. Such a taking can occur through direct killing or significant habitat modification or degradation.

Problems

Major loopholes still exist in U.S. law. One loophole results from the U.S. practice of separating the ownership of minerals from the ground underneath which they are located. As a result, minerals underneath federally owned and protected surface areas may be privately owned, and the private entity may have a right to extract the minerals that is not affected by the surface protections. Another loophole is the fact that mines can be fully developed outside protected areas without any additional restrictions, even if mine discharges of air and water pollution as well as its disturbance of landscapes destroy the environmental and recreational and aesthetic integrity of the park. The National Park Service to its credit does try to coordinate its planning efforts with the owners of lands adjacent to National Park System lands to prevent effects of mining operations from spilling over into Park System lands, but has no legal authority to prevent mining from proceeding.¹⁰⁵

6.4 GHANA

Background

Ghana covers approximately 23.8 million hectares of land. Mining comprises about 4.1% of Ghana’s GDP and about 41% of its foreign exchange earnings.¹⁰⁶ Between 1990 and 2002, the Government collected US\$68.6 million in royalty payments and US\$18.7 million in corporate income tax from mining companies. Gold is Ghana’s primary mineral, contributing about 93% of total mineral output.¹⁰⁷

Permitted Mining within Protected Areas

The National Land Policy of 1999 declares forest reserves, strict nature reserves, national parks, wildlife sanctuaries and similar land categories as Ghana’s permanent forest and wildlife estates, with forest reserves being the dominant type

¹⁰⁰ 42 U.S.C. §§ 4321 et seq. (U.S.A.).

¹⁰¹ 33 U.S.C. §§ 1251 et seq. (U.S.A.).

¹⁰² 42 U.S.C. §§ 7401 et seq. (U.S.A.).

¹⁰³ 16 U.S.C. §§ 1531 et seq. (U.S.A.).

¹⁰⁴ Robert A. Basset and Ricardo Ihnen Becker, *Myth or Reality – Has Environmental Regulation Destroyed the US Mining Industry?*, in *International and Comparative Mineral Law and Policy: Trends and Prospects* 697, 703 (Elizabeth Bastida, Thomas Wälde, & Janeth Warden-Fernández eds., 2005).

¹⁰⁵ U.S. Department of the Interior, National Park Service, *Nature & Science: Geologic Resources - Mining Operations Management*, <http://www.nature.nps.gov/geology/mining>.

¹⁰⁶ Ministry of Finance and Economic Planning of Ghana, *The Budget Statement and Economic Policy of the Government of Ghana* (2005).

¹⁰⁷ Daniel Kwabena Twerefou, Ernest Aryeetey, & Osei Bafour, Institute of Statistical Social and Economic Research, University of Ghana, *Impact of Mining Sector Reforms on Output, Employment and Incomes in Ghana, 1980-2002*, available at http://www.isser.org/index.php?option=com_content&task=view&id=62Itemid=11 (2007).

of protected land. These areas are protected for ecosystem maintenance, biodiversity conservation and sustainable timber production, as well as education, research, recreation and tourism when such uses are compatible with the conservation of the environment. Forests are additionally declared for the “conservation and sustainable development of the nation’s forest and wildlife resources for the maintenance of environmental quality and perpetual flow of optimum benefits to all segments of society.”

A host of piecemeal laws currently govern mining in Ghana, but no law or regulation speaks directly to the issue of mining in forest reserves or other protected lands. The most comprehensive law, the Minerals and Mining Law of 1986, as amended by the Mining Amendment Act of 1994, does not even require mining operations to meet any specific environmental standards *outside* reserves.

- **Strict Nature Reserves, National Parks, and Wildlife Sanctuaries.** No law currently addresses mining within these protected areas. Mining is not explicitly mentioned in the National Land Policy of 1999 as a permitted or banned activity, but its high-impact nature suggests, by implication, that the policy did not intend to permit it.
- **Forest Reserves.** Before 2003, no law or policy spoke directly to the issue of mining in forest reserves. Nevertheless, applicable Government policies set forth broad principles that suggested mining on a large scale in forest reserves should be restricted because of the threat to forest integrity and other forest uses. In 1996, in response to a national and international campaign to halt the granting of mining permits in forest reserves, the Ghanaian Mining Ministry declared a moratorium on the issuance of new permits.¹⁰⁸

In 2003, the Government officially lifted the moratorium on mining in the country’s extensive forest reserves, including those designated as “protected” reserves. This action was taken contrary to Ghana’s own legislation protecting forest reserves, but was likely based on mining groups’ argument that mining was important for Ghana’s economy and status as an investor-friendly country. To address the concerns of both Government officials and various sectors of civil society who oppose the permitting, the Chamber of Mines, an industry coalition, proposed Environmental Guidelines for Mining in Productive Forest Reserves. The Ministry of Mines and Forestry Commission essentially adopted these guidelines as law the same year. The guidelines allow for mining in reserves, but subject them to some form of heightened regulation. For example, ore extraction alone will be allowed within the forest reserve, with all related infrastructure, processing, accommodations, and office facilities restricted to areas outside the reserve. In addition, all mining from inside forest reserves will be subject to an additional royalty of 0.6% payable to local communities.¹⁰⁹ These guidelines currently govern new operations permitted specifically in the forest reserves.

Other Relevant Statutes Governing the Environmental Impacts of Mining

The Environmental Assessment Act of 1999 (EAA) provides some regulation of mining in protected lands. The EAA requires that the Environmental Protection Agency issue an environmental permit before mining can be undertaken. A screening process will determine what adverse effects on the environment or public health a proposed mining project will cause. The Agency will assess the application, create a screening report, and if approved, register and issue the environment permit.

Problems

The 2003 Government decision to permit mining in forest reserves has caused great opposition. Civil society groups have argued that the Government’s actions violate national policy and are contrary to international conventions of which Ghana is a signatory, such as the Convention to Combat Desertification, the Convention on Biological Diversity, and the Kyoto Protocol.¹¹⁰ Revisions to the law were proposed in 2006, but they did not address mining in forest reserves or other protected lands. Instead of calling for blanket prohibitions of mining in all forest reserves, the revisions would simply give the Minister of Mines the discretion to impose restrictions on “mineral operations in or near a river, dam, lake, forest or stream.” Critics of the proposed bill have emphasized the risks of leaving conservation decisions to the discretion of the Mining Ministry whose priorities are often not aligned with conservation interests and policies.¹¹¹ Overall, Ghana’s national policy impliedly prohibits mining within protected lands, but the Government’s actions have

¹⁰⁸ Asad Ismi, MiningWatch Canada Mines Alert, Canadian Mining Companies Destroy Environment and Community Resources in Ghana (July 2003), available at http://www.miningwatch.ca/updir/Cdn_Cos_in_Ghana.pdf.

¹⁰⁹ Joseph Coomson, *Ghana: Gov’t will grant mining concessions*, Ghanaian Chronicle, September 3, 2003.

¹¹⁰ Press Release, National Coalition of Civil Society Groups Against Mining in Ghana’s Forest Reserves, A Presentation to the Ghanaian Media (March 31, 2004), available at www.bicusa.org/Legacy/Coalition_press_statement_March04.pdf.

¹¹¹ Mines and Communities, Ghana: Memorandum on the Minerals and Mining Bill 2005 Submitted by the National Coalition on Mining, available at <http://www.minesandcommunities.org/article.php?a=1803>.

suggested otherwise. Until Ghana establishes clear, detailed policy for mining within each designated area of protected lands it remains uncertain whether such lands are in fact being protected against mining.

6.5 SOUTH AFRICA

Background

South Africa's surface area covers approximately 121.9 million hectares of land. In 2007, mining accounted for about 7.7% of South Africa's GDP, amounting to US\$19.2 billion. The country's 1,113 mines and quarries extract and produce around 55 different types of minerals, with the primary minerals being gold, platinum, coal, and diamonds.¹¹²

Permitted Mining within Protected Areas

The National Environmental Management: Protected Areas Act of 2003 and the National Forests Act of 1998 establish the different types of protected lands. The Protected Areas Act sets forth the mining policy for all protected lands, including forests.

- **Special Nature Reserve, Nature Reserve, National Park, Specially Protected Forest Areas, Forest Nature Reserves, and Forest Wilderness Areas.** Special nature reserves are issued to protect highly sensitive, outstanding ecosystems, species, or geological or physical features, primarily for the purposes of scientific research or environmental monitoring. Nature reserves are protected for the sustainable use of their natural features or biodiversity through consumption or tourism, and to preserve areas of scientific, cultural, historical or archaeological interest. National parks are established to protect the ecological integrity of areas of national or international biodiversity or representative samples of South Africa's natural systems, scenic areas or cultural heritage sites.¹¹³ Forest areas are protected as forest nature reserves or forest wilderness areas if not adequately protected under another law.

The Act prohibits any and all mining within these identified protected lands regardless of other legislation.

- **Protected Environments.** Protected environments are established to create a buffer zone of protection around other protected lands, to grant landowners the right to take necessary legal action to conserve biodiversity, to ensure sustainable use of natural resources, or to protect an area awaiting declaration as a nature reserve.¹¹⁴ No mining can occur in a protected environment without written permission from the Minister and Cabinet member responsible for minerals and energy affairs. The given Minister and Cabinet member must provide the conditions at which the mining can occur.

Other Relevant Statutes Governing the Environmental Impacts of Mining

The Minimum Petroleum and Resources Act of 2002 prohibits any mining from occurring on any lands, protected or not, without an environmental management plan or program. Such a plan or program must include: baseline information of the affected environment, analysis of the proposed environmental and socio-economic impact of the proposed prospecting or mining, establishment of an environmental awareness plan for employees, and develop a plan regarding potential pollution and waste. In addition, a prospecting license will only be administered if such prospecting will not result in unacceptable pollution, ecological degradation, or damage to the environment. Any holder of a reconnaissance permission, prospecting permit, mining permit, mining right, or retention permit must abide by the rules and regulations of the National Environmental Management Act of 1998. All affected land must be reasonably rehabilitated to its natural or predetermined state or to a sustainable development use level that is generally accepted. Each applicant must prove financial capacity to rehabilitate and manage potential negative environmental impacts. If the application is approved, a financial provision must be made before the permit is granted. The financial provision must be modified based on annually assessed environmental liability.

The Biodiversity Act of 2004 requires that areas identified as critically endangered eco-systems, endangered eco-systems, vulnerable eco-systems, and protected eco-systems follow the management plan required under the Protected Areas Act of 2003 before any threatening process is undertaken. Furthermore, any activity that threatens the survival of an identified critically endangered species, endangered species, vulnerable endangered species, and protected species requires a permit. This implies that mining activities affecting endangered eco-systems and species within areas not necessarily identified as protected lands are also subject to regulation.

¹¹² Department of Minerals and Energy of South Africa, Overview of the minerals industry, *available at* http://www.dme.gov.za/minerals/mineral_info.stm.

¹¹³ National Environmental Management: Protected Areas Amendment Act 31 of 2004 s. 6 (S. Afr.).

¹¹⁴ National Environmental Management: Protected Areas Act 57 of 2003, s. 28(2)(a)-(f) (S. Afr.).

Problems

South Africa's strict environmental regulations may give the impression that the country does not have problems with mining in protected lands. But South Africa's constitution gives Government agencies responsibility for environmental management on a national, provincial, and local level.¹¹⁵ As such, most laws for environmental protection are passed on a national level, but many regulations enforcing those laws are passed at all levels, giving various Government departments responsibility for administering the law.¹¹⁶

For example, the Protected Areas Act gives a suitable person, organisation, or organ of state the responsibility for developing a management plan for a given area of protected land. But since different groups are creating management plans around the country, this can result in different levels of regulation and may create difficulties in determining who the proper authority is.¹¹⁷ The Act attempts to minimize the potential discrepancies by requiring the management authority to consult with other municipalities, organs of state, local communities and affected parties interested in the protected area. But since this collaboration is not explicitly regulated, the extent at which it is practiced remains unclear.

Furthermore, the Minimum Petroleum and Resources Act of 2002 requires that all proposed mining projects develop an environmental management plan or program before a license can be issued. Review of the management plan or program is done by each state, in accordance with a national code of good practice.¹¹⁸ However, because such a code will only be developed through repeated judicial interpretations, the body of law will be slow to develop. In the meantime, states will retain a great deal of administrative discretion over whether a given management plan is sufficient, which may result in an array of decisions nationwide.¹¹⁹

6.6 ZAMBIA

Background

Mining represents the single most important sector of the Zambian economy. Mining represents the single largest contributor to the country's GDP, and export of copper and cobalt alone represents 64% of the country's exports. Copper has historically been the primary mineral, but uranium is also present and with the rise in uranium prices, Zambia has actively courted international uranium mining companies.¹²⁰

Permitted Mining within Protected Areas

Recent changes to the law of protected lands in Zambia have divided protected lands into 2 categories. Approximately 30% of the country's land has been placed into one of the two categories.

- National and Local Forests.** National Forests are protected "with a view to securing supplies of timber and other forest produce, providing protection against floods, erosion and desiccation and maintaining the flow of rivers," though the Government is authorized to allow any activity in a National Forest if it is deemed to be in the public interest.¹²¹ Local Forests are protected "with a view to securing supplies of timber and affording protection to land and water supplies in the local area," and no blanket exemption exists for other activities deemed to be in the public interest.¹²² Mining is not excluded from these lands, though the Government is authorized to buy out mining claims if it is "expedient or desirable." When declaring new parks, if the Government does not buy out mining claims, often lands with mining claims on them are carved out from the area declared to be a National or Local Forest.¹²³ Unlike National Parks, the laws governing forests do not state in any detail how mining should proceed, except for a provision requiring projects to receive consent from the necessary authorities.¹²⁴

¹¹⁵ Mansfield at 118.

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ Michael Dale, *Comparative International and African Mineral Law as Applied in the Formation of the New South African Mineral Development Legislation*, in *International and Comparative Mineral Law and Policy: Trends and Prospects* 823, 833 (Elizabeth Bastida, Thomas Wälde, & Janeth Warden-Fernández eds., 2005).

¹¹⁹ *Id.*, 834.

¹²⁰ Central Intelligence Agency, *Zambia*, in *The World Factbook* (2009), available at <https://www.cia.gov/library/publications/the-world-factbook/geos/za.html>; Mining Weekly, *Zambia enacts uranium mining law*, October 6, 2008, available at <http://www.miningweekly.com/article/zambia-enacts-uranium-mining-law-2008-10-06>.

¹²¹ Forests Act sec. 12 (1974) as amended (Zambia).

¹²² *Id.*, sec. 21.

¹²³ *Id.*, secs. 11, 20.

¹²⁴ See, e.g., Mines and Minerals Development Act, 2008, sec. 15(c) (Zambia).

- **National Parks and Game Management Areas.** National Parks are set aside for “conservation or protection and enhancement of wildlife, eco-systems, biodiversity and natural beauty” and to generate tourism revenue from these features.¹²⁵ “Game Management Area” is a revocable designation used to create a network of buffer zones surrounding the National Parks of the country, aimed at ensuring the “sustainable utilisation of wildlife.”¹²⁶

The Wildlife Act explicitly states that no section in the Act “shall be construed as preventing or restricting the granting in respect of any land within a National Park . . . of any mining right.”¹²⁷ The Wildlife Act requires proposed projects to conduct an environmental impact assessment in accord with the Environmental Protection and Pollution Act, and gives the Director-General of the Zambia Wildlife Authority independent power to impose conditions on the mining project, though this power must be exercised in a manner “consistent with the nature of [the] mining right held by [a] person,” which would presumably rule out the possibility of an outright prohibition.¹²⁸ However, the Act does explicitly empower other agencies in the Government to prohibit mining in a National Park or game area.¹²⁹ Additionally, the Mines and Minerals Development Act reinforces the provisions of the Wildlife Act by allowing the Director of Mines to refuse licenses unless the project has received the necessary consent from the Wildlife Authority.¹³⁰

Other Relevant Statutes Governing the Environmental Impacts of Mining

Even when not mentioned in the laws governing mining and protected lands, the Environmental Protection and Pollution Act applies to any mining operation.¹³¹ This law requires any mining project to file an environmental impact assessment and get approval from the Environmental Council before proceeding with a mining project.¹³² Yearly re-assessments are also required.¹³³ Additionally, Zambia recently passed a law specifically regulating uranium mining, milling, and export.¹³⁴

Problems

The central problem facing Zambia is that its economy is so tied to the mining industry that it cannot effectively regulate it without doing damage to the livelihoods of its own people. Despite the lack of blanket protections for protected areas, environmentalists in the country say that the laws in force are sufficient; what is lacking is the will to enforce them. Even as mining projects have accidents that pollute the Zambezi River and endanger protected areas that are important for tourism, the Government cannot crack down on the mining companies for fear that it might shut down the mines and cost the country jobs. The problem is magnified by the fact that international mining companies had, until recently, extremely favourable concessionary contracts with the Zambian Government, and paid Zambia only 0.6% royalties when the global norm was 3%. Additionally, when metals prices were high, remote protected areas were particularly at risk of illegal exploitation; since the Zambian Government could not afford to enforce the laws on the mines it had approved, it was no surprise that it had trouble preventing illegal mining in parks and game management areas.¹³⁵

The royalty amount has been fixed, but only in time to see metals prices collapse. This collapse in metals prices has highlighted again the vulnerability of the Zambian economy to fluctuations in the price of copper. Now that prices are low, so are corporate profits, and so are tax revenues. Whether in good times or in bad, Zambia cannot afford to jeopardize the jobs in the mining sector that is the mainstay of the economy, and so its protected lands suffer as a result.¹³⁶

¹²⁵ Zambia Wildlife Act, 1998, secs. 10, 25 (Zambia).

¹²⁶ *Id.*, sec. 26.

¹²⁷ *Id.*, sec. 13.

¹²⁸ *Id.*, sec. 24.

¹²⁹ *Id.*, sec. 144(2)(j).

¹³⁰ *See, e.g., id.*, sec. 26(1)(f).

¹³¹ Environmental Protection and Pollution Act, (1990), as amended, Environmental Impact Regulations, sec. 3, and First Schedule, sec. 4 (1997) (Zambia).

¹³² *Id.*

¹³³ *Id.*, Regulations, sec. 28.

¹³⁴ Mining Weekly, Zambia enacts uranium mining law, October 6, 2008.

¹³⁵ John Sacala, *Record copper prices stir illegal mining*, Times of Zambia, available at <http://www.times.co.zm/news/viewnews.cgi?category=8&id=1212058374>.

¹³⁶ Africa Biodiversity Collaborative Group, Zambia's First 'Partnership Park', a Model for African Protected Areas, and Alternatives to Extractive Industry Development, <http://www.frameweb.org/CommunityBrowser.aspx?id=3132>; The Northern Miner, Zambian president proposes increased mining taxes, January 15, 2008, available at [http://www.northernminer.com/issues/ISarticle.asp?id=78758&story_id=&issue=01152008&PC=](http://www.northernminer.com/issues/ISarticle.asp?id=78758&story_id=&issue=01152008&PC=;); United Nations Integrated Regional Information Networks, Zambia: mining companies accused of negligence, January 8, 2008, available at <http://www.irinnews.org/Report.aspx?ReportId=76144>.

6.7 SYNTHESIS OF LESSONS LEARNED AND POTENTIAL APPROACHES FOR NAMIBIA

Some of the experiences of these countries are difficult to translate into policy prescriptions because chosen policies may involve unclear tradeoffs and others are highly context-specific. However, the case studies do present clear cautionary tales of practices to avoid.

Decentralization. While devolving power to local authorities can be beneficial in some contexts, when it comes to the interpretation and enforcement of mining laws in protected lands it leads to serious problems. In Australia and South Africa, decentralization created an uncertain regulatory environment that varied around the country despite the central government's passage of laws favourable to the environment.

Narrow Boundary Drawing. When it comes to fixing the borders of new protected lands, in Canada and Zambia the boundaries of a proposed park can be shifted to exclude lands with potential for mineral development. While this might prevent mineral development from taking place within a park, it comes at the cost of encouraging mining activity just outside a park's gates, making it likely that the negative effects of mining will spill over into the park. As can be seen from the U.S.'s experience, park authorities often have only the power of persuasion when it comes to regulating activities outside park borders. If an area or ecosystem merits protection from an environmental viewpoint, governments should not sacrifice the sanctity of such areas for unproven mining potential.

Ministerial Discretion. Giving ministers broad, unbridled discretion in the enforcement of governmental policy is often a good way to ensure that executive departments have the flexibility to overcome unexpected challenges and achieve the goals of legislation. When it comes to environmental protections, though, such an approach risks making the protection of sensitive lands dependent upon particular office holders and transitory political circumstances. As Ghana's experience shows, the notoriously volatile prices of metals combined with politicians' natural desire to promote job creation for their constituents means there can be no guarantee that protected lands will always be held inviolate.

Recommendations

The following recommendations are based on the desk analysis of Namibia's legal framework, international best practices, international case studies, and opinion data collected from the interviewed and surveyed stakeholders. The stated recommendations are classified as action proposals regarding Namibian environmental and mining legislation, implementation, and policy.

7.1 MODIFICATION OF PROPOSED AND EXISTING LEGISLATION

- Strengthen the Environmental Management Act 2007 by requiring immediate compliance of all existing prospecting and mining operations. Specifically, amend section 57(1) to only allow existing projects one year to submit an application for an environmental clearance certificate, removing the minister's discretion to grant any further extensions.
- Add teeth to the Environmental Management Act 2007 by adding a provision that finds environmental assessment circumvention as a form of corruption punishable by criminal law.
- Improve and pass the Parks and Wildlife Management Bill 2008. This law must:
 - Create a legal mechanism for identifying and classifying protected lands to ensuring their preservation. Section 17 and schedule 2 of the current draft bill are good steps in this direction. Together, these two provisions establish the purpose for each class of protected land, which will help decision makers determine whether mining should be allowed in a given area.
 - Establish protected areas or parts thereof that will not be available for prospecting or mining. Section 25(1) creates a discretionary process whereby the ministers of the MET and MME can agree upon "no go" areas, but the law should require that the ministers use this power. The law must require the ministers to declare lands that meet the criteria listed in the law to be off limits to mining.
 - Create provisions whereby designations of areas declared off limits under section 25(1) may only be altered or revoked by act of Parliament
 - Clearly establish the legal criteria applicable to proposals for mining within protected lands. At present, mining projects proposed for protected lands are treated the same as any other proposal.
 - Enshrine in law a preference against mines in protected lands. At present, the decision about whether to allow mining of protected lands is subject to ministerial discretion, which makes these lands vulnerable during times of high commodity prices.
- Amend the Minerals Act 1992.
 - Require mining license applicants to make, in advance, adequate and sufficiently liquid financial provisions for the costs of mine closure, including reclamation, long-term monitoring, and maintenance.
 - Require the MME to conduct background checks on corporations as well as individuals to look for history of prior environmental violations or other illegal practices.

7.2 INCREASE ENFORCEMENT AND PROPER IMPLEMENTATION OF CURRENT LAW

- Ensure that environmental management plans submitted in the permitting process meet the heightened duty to prevent harm from falling to protected areas because of their ecological significance and vulnerability.
- Establish detailed and appropriate regulations to allow for enforcement of the Environmental Management Act 2007. These regulation should include at a minimum the following provisions:
 - Ensure that EMA regulations require identification of all lifecycle costs in the EIA report, including the cost of reclamation, closure, re-contouring, land stabilization, post-closure monitoring, maintenance, and exposures. Mine sites should be rehabilitated to their natural or pre-determined states or to a generally accepted sustainable development use level.

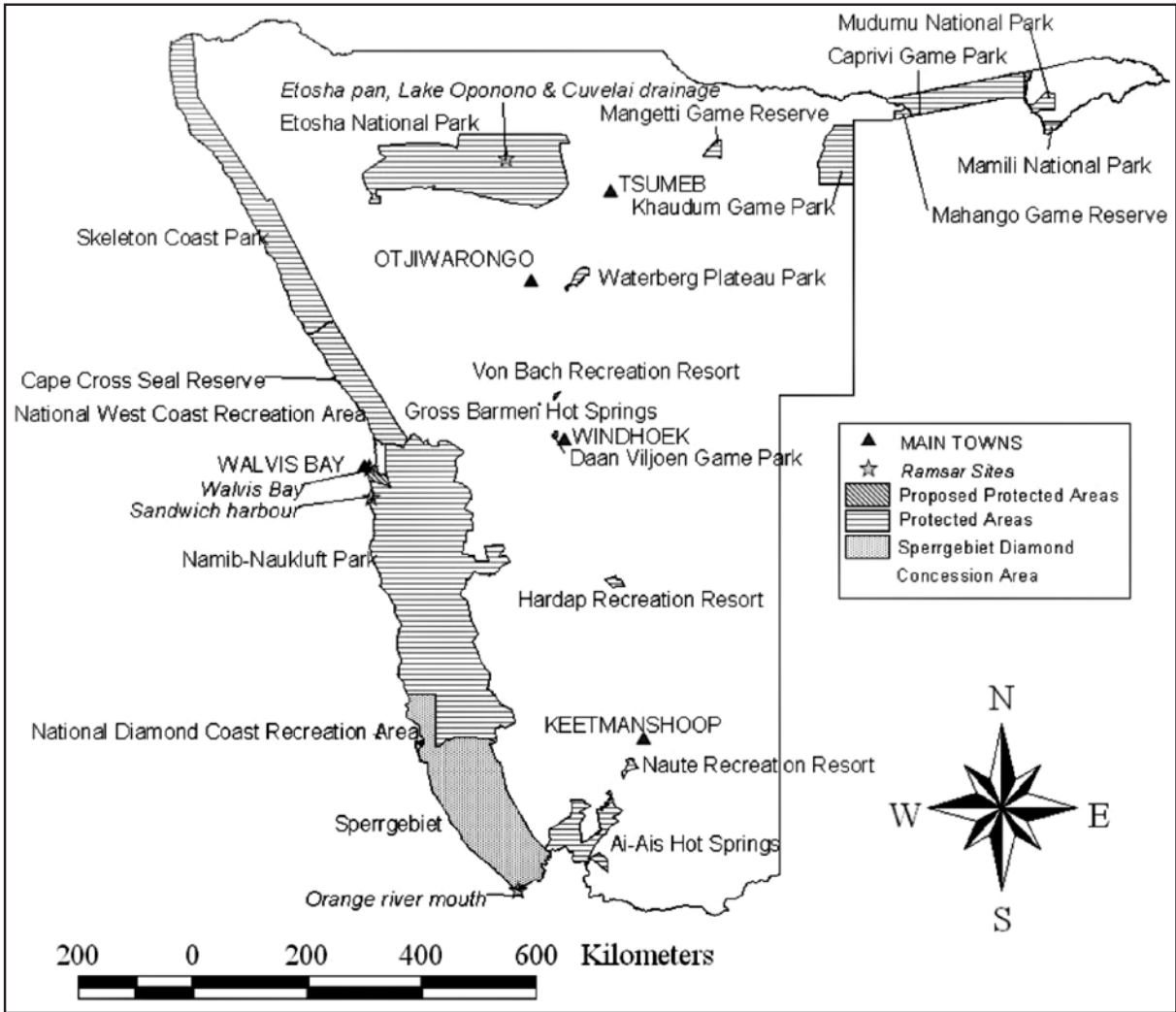
- Ensure that EMA regulations include detailed instructions for developing an EIA. Decision makers should ensure that the information collected and utilized in a required EIA is accurate and reliable, and fully reflects pre-project site conditions.
- Provide detailed regulations for the inclusion of financially and physically feasible rehabilitation plans to be included in an environmental impact assessment.
- The structure of Records of Decision (ROD), as identified by the EMA regulations, should be reviewed to include much more precise and detailed information, specifically with respect to the criteria used in making the decision; reasons for the arriving at a decision; transfer of rights and obligations if there is a change of ownership of the project or property; and specific conditions to protect the environment. There needs to be improvement in the way that DEA sets conditions that proponents must adhere to when they are authorized to proceed with their project. Currently, many RODs are vague and very short on detail.
- Ensure quality control in the environmental assessment guide and review process by screening unethical or unqualified EA consultants out of the system.
- When reviewing EIAs, use strategic assessments to take into account the cumulative impact of granting multiple mining and exploration permits.
- Use independent experts (e.g., consultants or NGOs (international and national)) to help with assessments, inspections, and audits to remedy any lack of technical expertise among ministry staff.
- Appoint an Environmental Commissioner to enforce the Environmental Management Act 2007.

7.3 DEVELOPMENT AND PRACTICE OF IMPROVED POLICY

- Prohibit all new mineral activities in existing and proposed protected areas until the EMA regulations are in force.
- Immediately grant protected status to expired mineral licenses within protected areas without allowing any renewal periods.
- Encourage companies to voluntarily forfeit existing mineral licenses in existing and proposed protected areas as a part of good corporate citizenship.
- Improve knowledge and technical skills amongst decision makers to ensure implementation of quality environmental assessments and strategic assessments. This includes finding ways for decision makers to visit the sites that they will be reviewing so that they can make informed decisions.
- When reviewing EIAs, decision makers should assume that the proposed project will have adverse environmental impacts, therefore placing the burden on the applicant to prove that it will not.
- Create an alert list of stakeholders to notify when EIA reports and expert evaluations are available at the Office of the Environmental Commissioner. This practice should be in addition to the public notice required by the EMA.
- Provide sufficient resources and funding to the MET to mobilize public awareness, support, and appreciation for Namibia's protected lands. This campaign should include information both on the environmental importance and vulnerability of the parks, as well as their potential to contribute to the country's economic development.
- As civil society becomes increasingly involved in holding the Government accountable for the proper implementation of environmental and mining law and policy, the Namibian Government should embrace this as an opportunity to strengthen its partnership with the public.

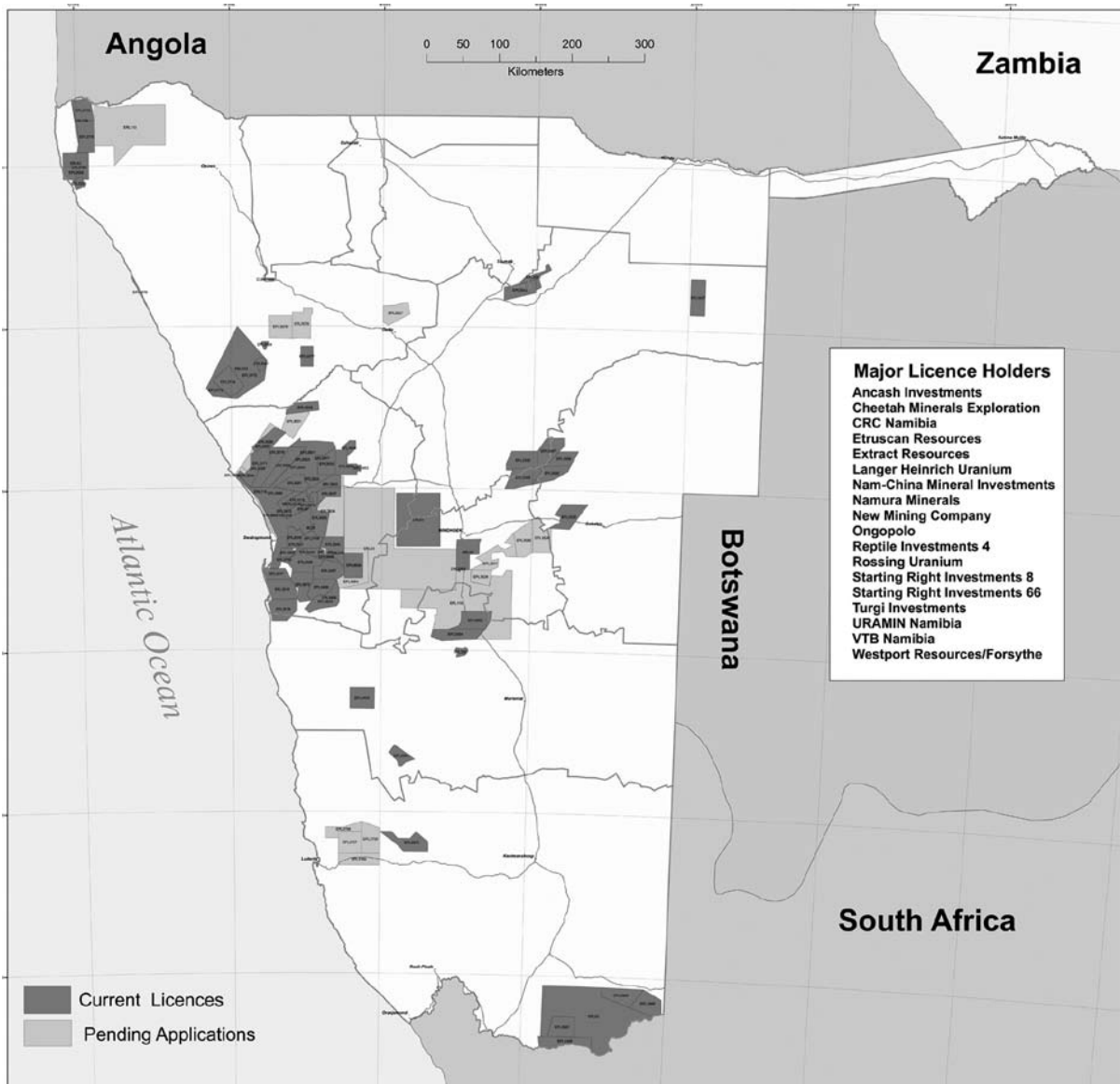
Figures

FIGURE 1: Map of Namibia's National Parks and Game Reserves¹³⁷



¹³⁷ Mansfeld at 2.

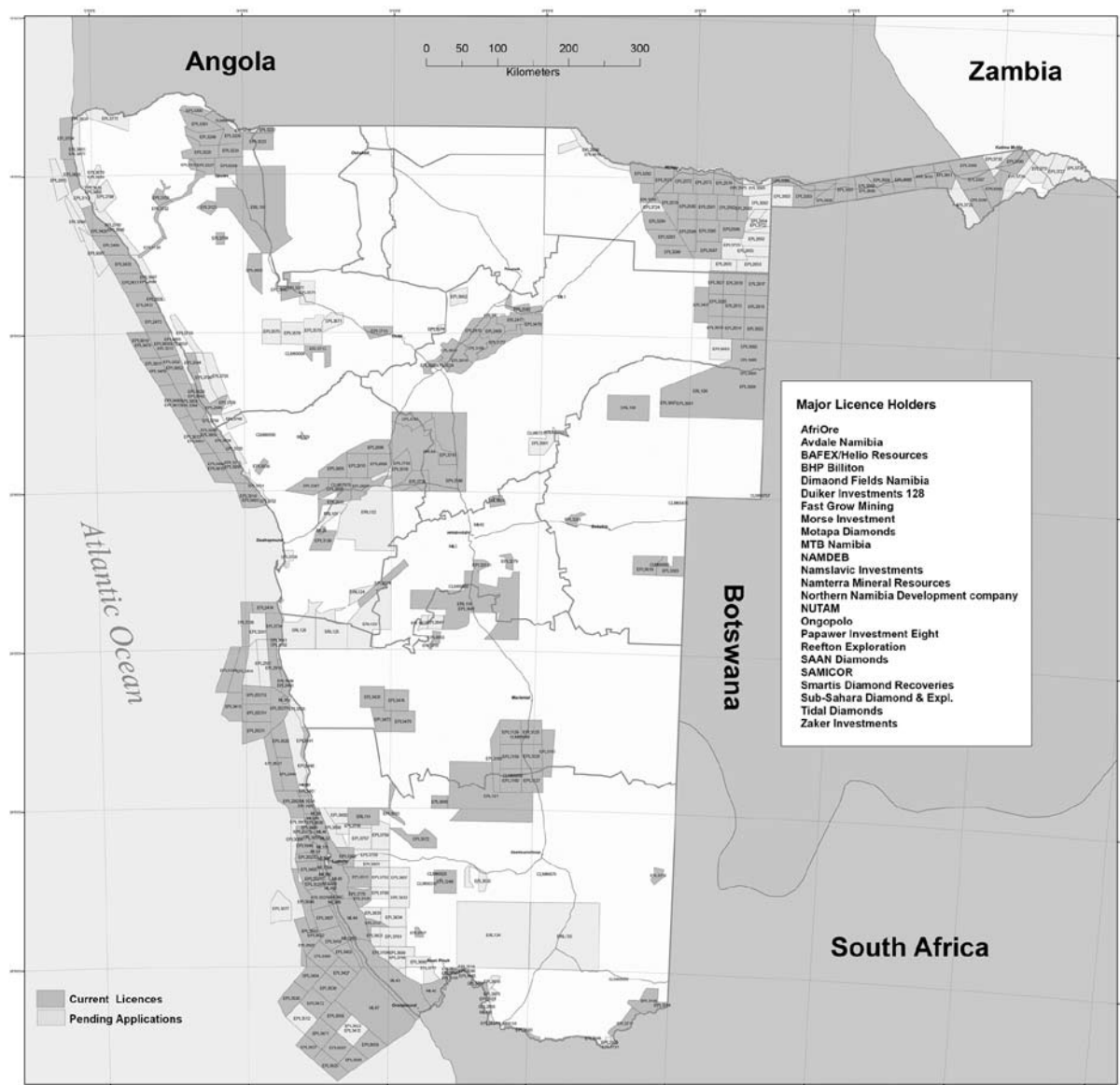
FIGURE 2: **Map of Current Nuclear Fuel Mineral Licenses**



Date: December 2007. Note that due to the practice of applying for several mineral groups, licenses may appear on more than one map.

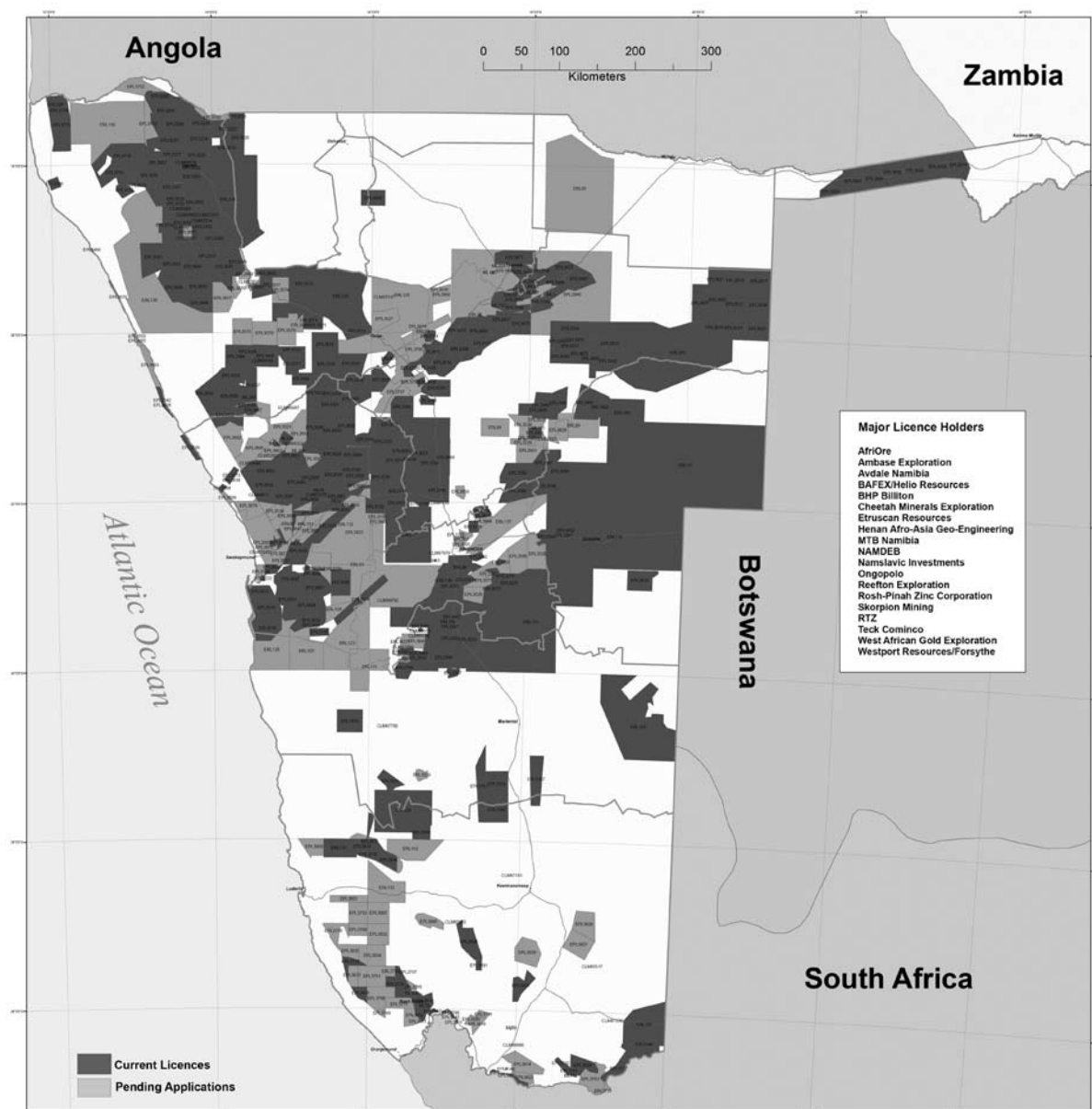
Source for figures 2-8: Ministry of Mines and Energy, <http://www.mme.gov.na/mines/forms.html> (last visited Jun. 22, 2009).

FIGURE 3: Map of Current Precious Stones Mineral Licenses



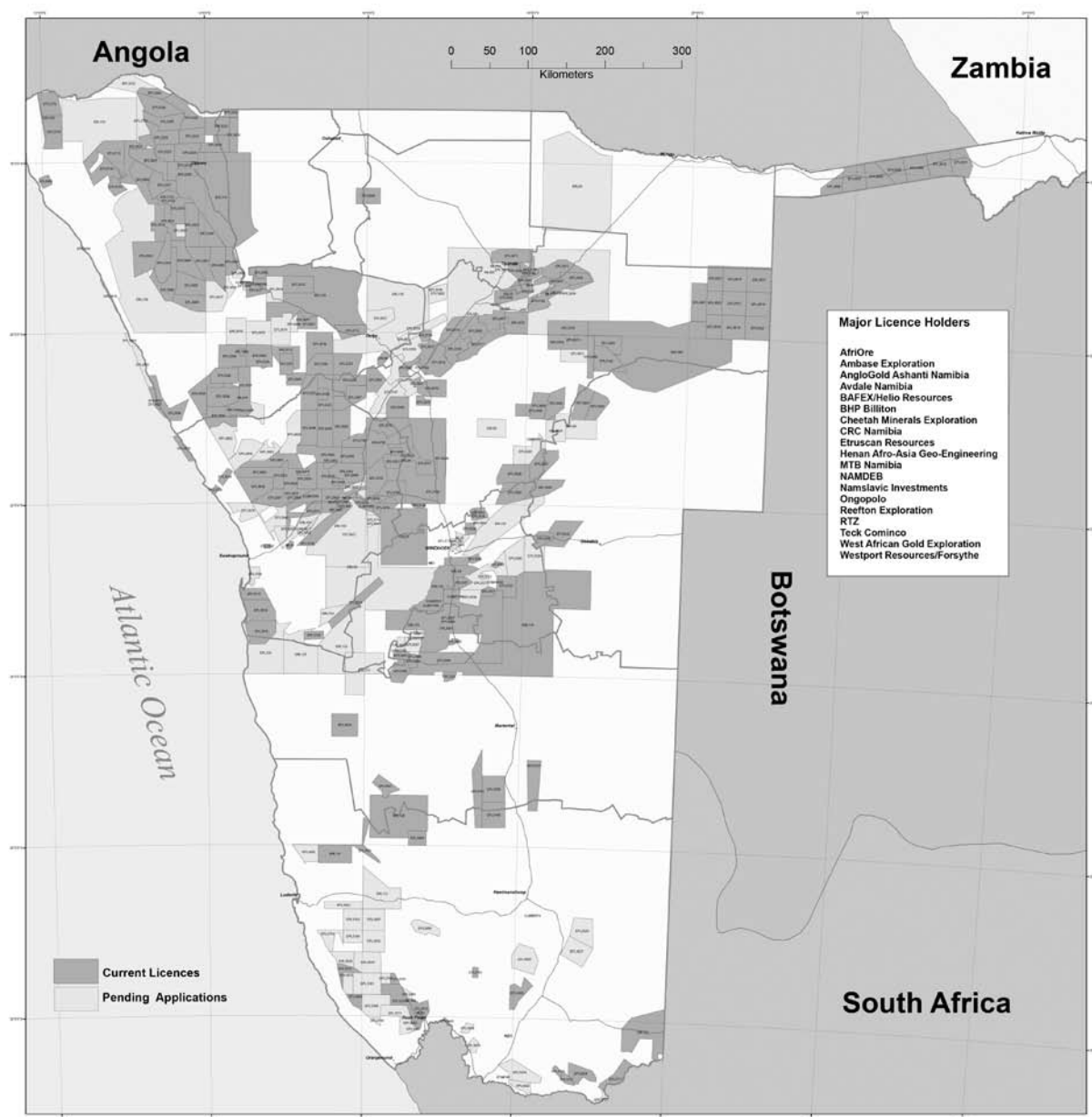
Date: December 2007. Note that due to the practice of applying for several mineral groups, licenses may appear on more than one map.

FIGURE 4: Map of Current Base and Rare Metals Mineral Licenses



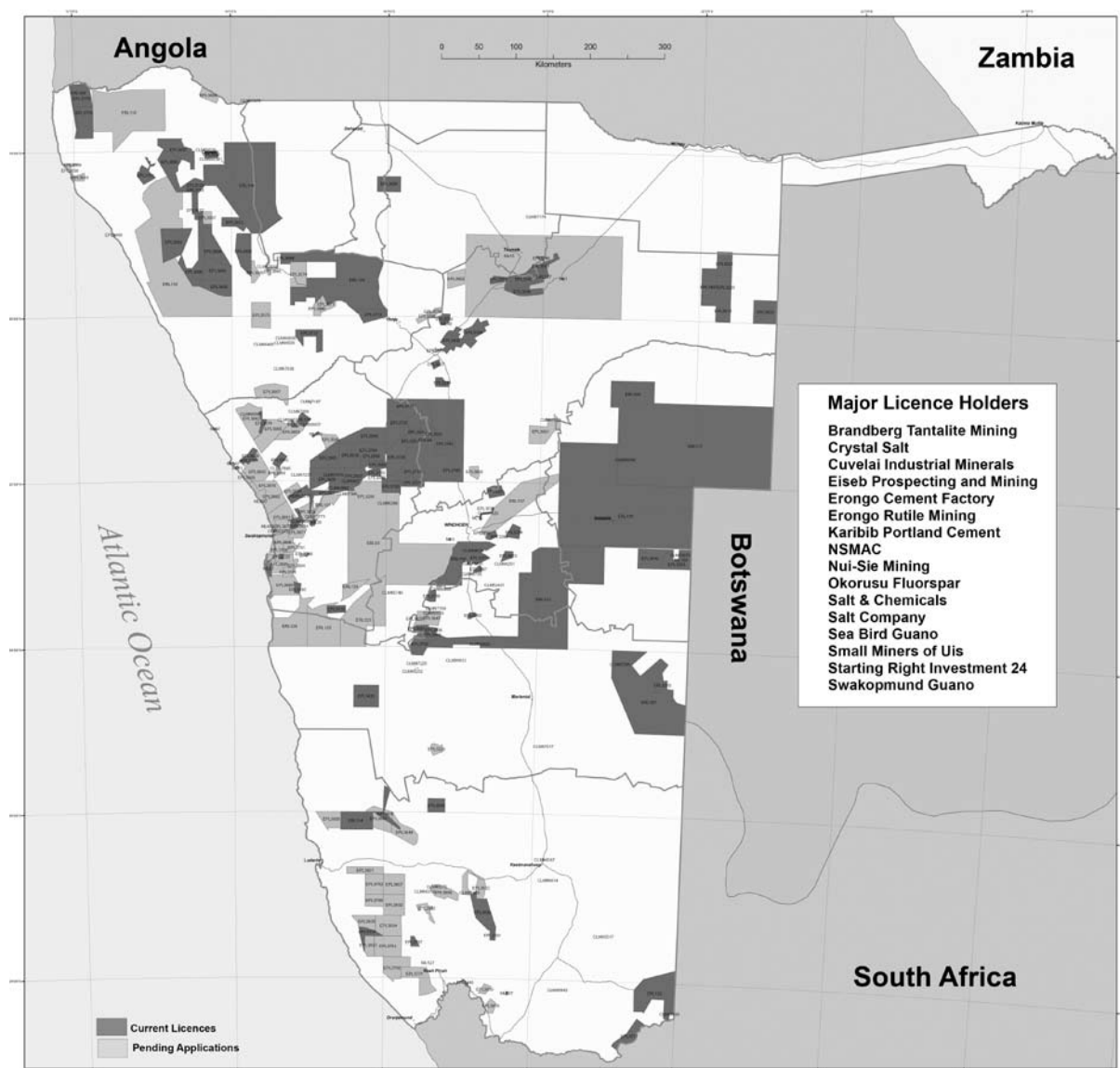
Date: December 2007. Note that due to the practice of applying for several mineral groups, licenses may appear on more than one map.

FIGURE 5: Map of Current Precious Metals Mineral Licenses



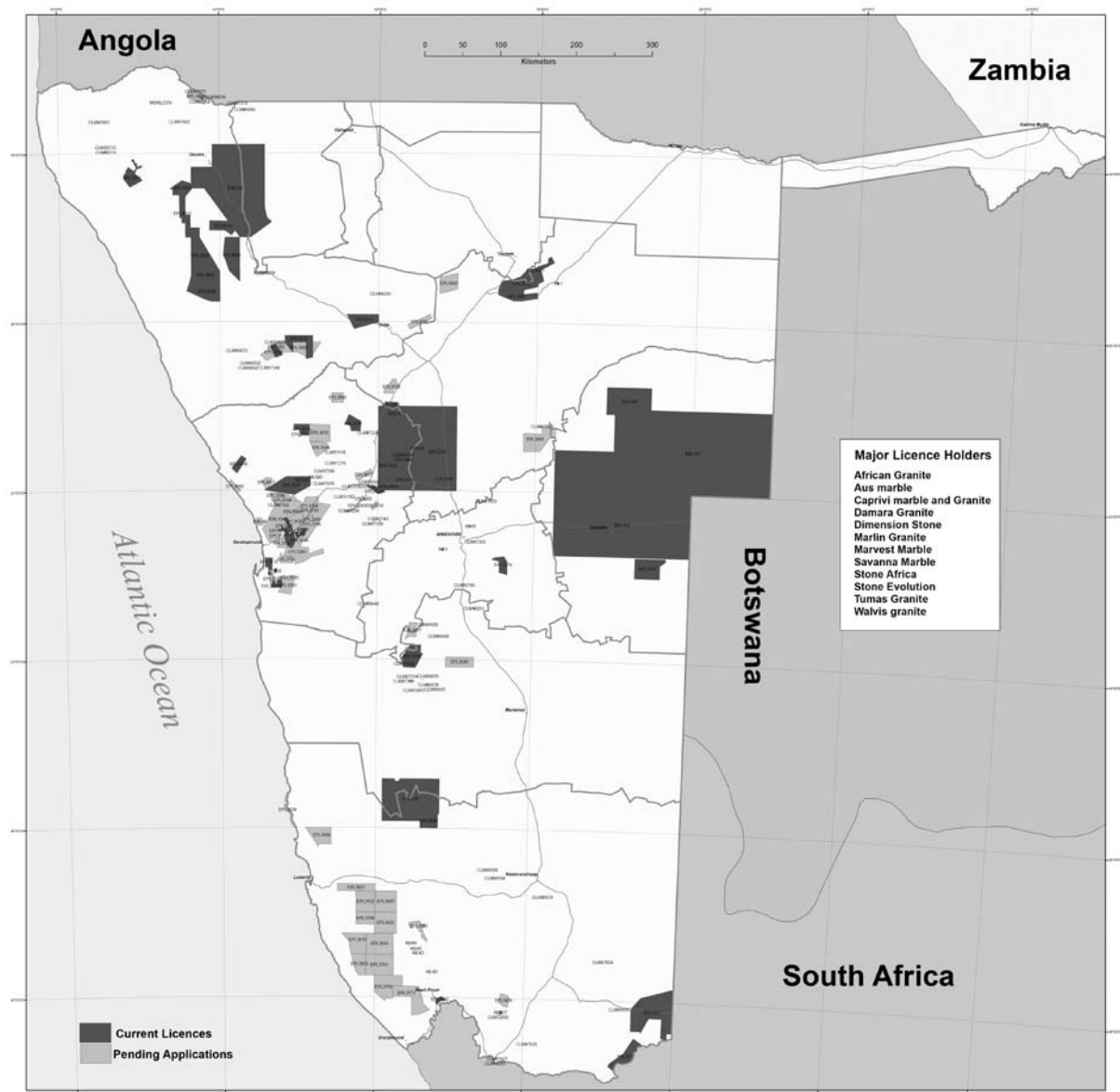
Date: December 2007. Note that due to the practice of applying for several mineral groups, licenses may appear on more than one map.

FIGURE 6: Map of Current Industrial Minerals Mineral Licenses



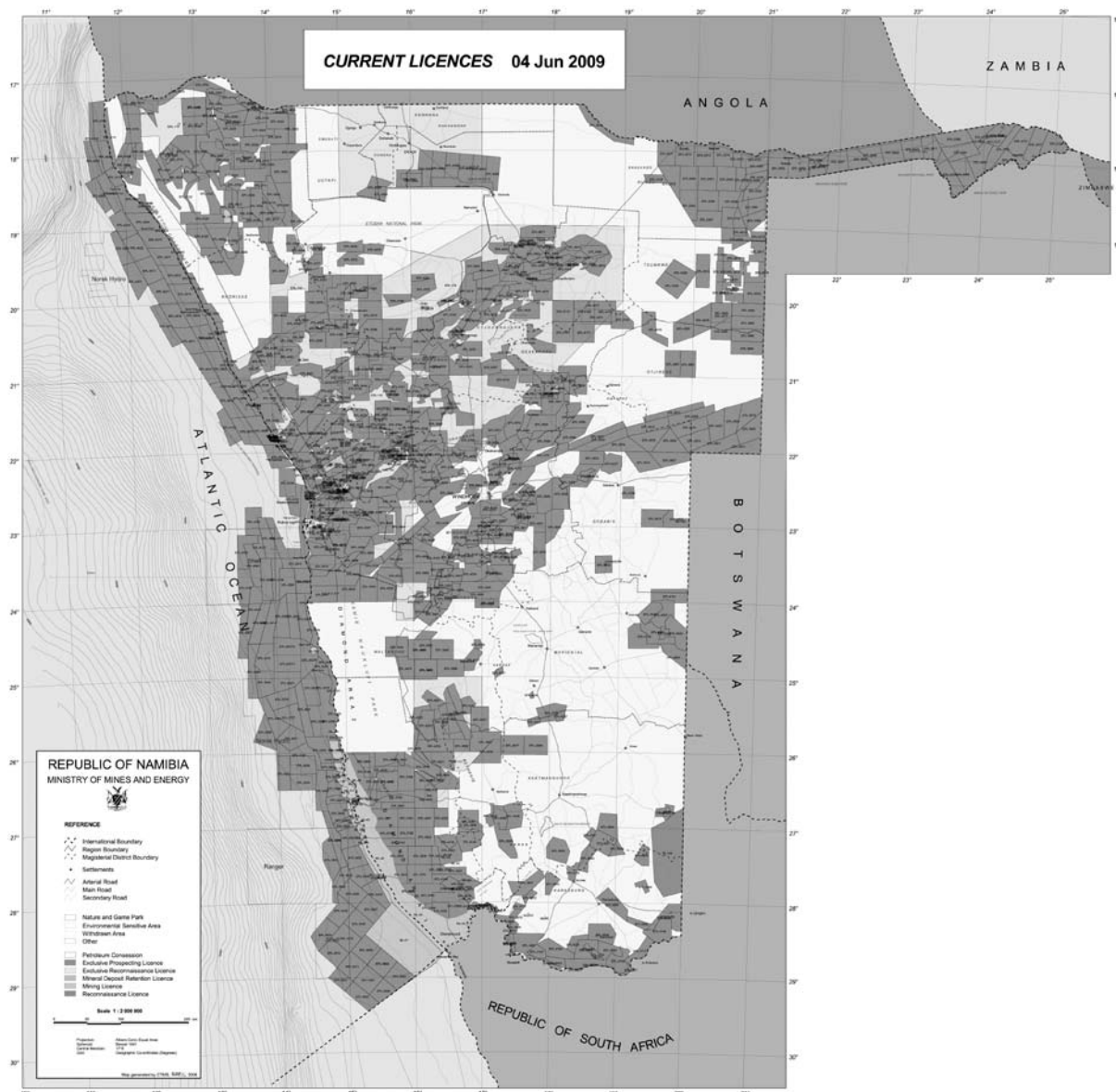
Date: December 2007. Note that due to the practice of applying for several mineral groups, licenses may appear on more than one map.

FIGURE 7: Map of Current Dimension Stones Mineral Licenses



Date: December 2007. Note that due to the practice of applying for several mineral groups, licenses may appear on more than one map.

FIGURE 8: Map of All Current Mineral Licenses



List of Interviewees

Institution	Person (& position)	Meeting/ Telephone/ Questionnaire
Ministry of Mines & Energy (MME)	Erasmus Shivolo (Director of Mines & Mining Commissioner)	M
	Dr G. Schneider (Director: Geological Survey)	M
Ministry of Environment & Tourism (MET)	Ben Beytell (Director: Parks & Wildlife)	M
	Mannie le Roux (Chief Warden: Namib-Naukluft Park)	M
	John Patterson (Warden: Skeleton Coast Park)	M
	Teo Nghitila (Director: Environmental Affairs - DEA)	M
	Fred Sikabongo (Head of EIA in DEA)	M
	Sem Shikongo (Deputy Director: DEA – Biodiversity & conventions)	M
Ministry of Agriculture, Water & Forestry (MAWF)	Dr S de Wet (Director: Water Resource Management)	M
	Dr Gillian Maggs Kölling (Director: NBRI)	T
	C.A. Mannheimer (Associate Researcher: NBRI)*	Q
NamWater	Arno du Plessis (Head of bulk water supply)	M
NamPower	Claudy de Beer (Environmental Manager for NAMPOWER)	T
Chamber of Mines	Veston Malango (CEO)	M
Exploration and Mining Companies	Inge Zamwani (NAMDEB: Chairperson of Board)	M
	Reiner Schneeweiss (Rössing Uranium)	T
	Fiona (De Beers Marine: Environmental Manager)	M
	Wyatt Buck (Langer Heinrich Uranium (Pty) Ltd: Mine Manager)	M
	Charles Cleghorn (Langer Heinrich Uranium Pty) Ltd: SHER	M
	Karen Mouton (Karibib Mining (Pty) Ltd: Safety Officer)	M
	Gerald Boting (Skorpion Zinc: Managing Director)	M
	Steve Smith (BAFEX Exploration (Pty) Ltd: Managing Director)	Q
	Richard Gevers (Okorusu Flourspar (Pty) Ltd: Engineering &HSE Manager)	Q
NNFU	Mr Tjimune (CEO)	M
NAU	Sakkie Coetzee (CEO)	M
Consulting Geologist	P.R. Siegfried	Q
EIA / Environmental Consultants	Colin Christian (self-owned consulting firm)	M
	Alex Speiser (A. Speiser Environmental Consultants cc)	M
	Stephanie van Zyl (Enviro Dynamics)	M
	B. Walmsley (SAIEA)	Q
	Jeremy Midgley (environmental consultant)	Q
Environmental / sustainable development NGOs	Martin Sikongo for Pintile Davids (RISE-Namibia)	T
	Dave Joubert (NEWS: Chairperson & Polytech)	T
	Keith Wearne (CETN: Chairman)	T
	Mary Seely (DRFN)*	M
	John Pallet (DRFN)*	M
	Maxi Louis (NACSO - Coordinator)	T
Municipalities	Mr Olavi (Walvis Bay Municipality: Environment Officer)	T
	Mr de Beer (Luderitz Municipality: Environment Officer)	T
Tourism private sector	Dave van Schmeedijk (Wilderness: CEO)	M
University of Namibia	P. Smit (Geography Dept)	Q

* Also carry out EIAs under consultancies

Questionnaire

NOTE: The format of the questionnaire has been changed slightly (spaces for writing removed) for inclusion as an appendix.

STAKEHOLDER SURVEY – INVESTIGATIVE STUDY ON MINING AND ENVIRONMENTAL ISSUES IN NAMIBIA

The Legal Assistance Centre has appointed NNF to conduct an investigative study about mining practices which are potentially harmful to the environment, particularly in national parks and protected areas.

This survey is part of the overall analysis. The information you provide will help to ensure that the reports provide a holistic overview of the current situation. Your answers will be completely confidential.

Date of interview:

Interviewer:

Person Interviewed:

Institution & Position:

From the list below please indicated which stakeholder group you belong to? (Select a max. of 2 groups)

1. Exploration/Mining Company (proponent)	7. Mining industry representative	13. Tourism sector
2. EIA consultant	8. Department of Water Affairs Official (MWAF)	14. CBO's
3. Protected Areas manager	9. other government institution	15. Regional Government Official
4. MET – Conservation Officer	10. NGO	16. Local Authority Official
5. MET – Environmental Officer	11. Donor project Official	
6. MME official	12. Parastatal Official	

Section A – Opinions about effectiveness of Environmental Safeguards in Protected Areas		Yes/ good	No	n/a
1.	Are there adequate laws that enable Namibia to keep mining impacts in Protected Areas within reasonable limits? <i>Please explain:</i>			
2.	Has the EIA process been properly followed before issuing mining licenses in Protected Areas in any instance that you know of? <i>If yes, please state EIA:</i>			
3.	What is your opinion of the quality of EIAs conducted in these instances?			
4.	What is your opinion on the standards of the review and approval process for prospecting and mining EIAs?			
5.	What is your opinion on the standard of the monitoring and compliance to environmental management plans resulting from the EIA process?			
6.	Do you think the MET is under undue pressure to approve EIAs and Environmental Management Plans for prospecting and mining licenses?			
7.	Do you think Minister (or authorized person) of MME is under undue pressure to approve prospecting and mining licenses without commissioning an adequate EIA report from the proponent?			
8.	Do you think that conducting an EIA should be mandatory prior to the award of an Exclusive Prospecting License in Protected Areas?			
9.	Do you think the granting of exploration/mining licenses is conducted in a professional manner?			
10.	Do you think the authorities set high enough standards when setting environmental safeguards for prospecting and mining in PAs?			
11.	Are the existing procedures regarding Environmental Assessment transparent?			
12.	Do you think that the same rules and procedures for prospecting and mining should apply equally in and outside of National Parks? <i>Please motivate your answer:</i>			

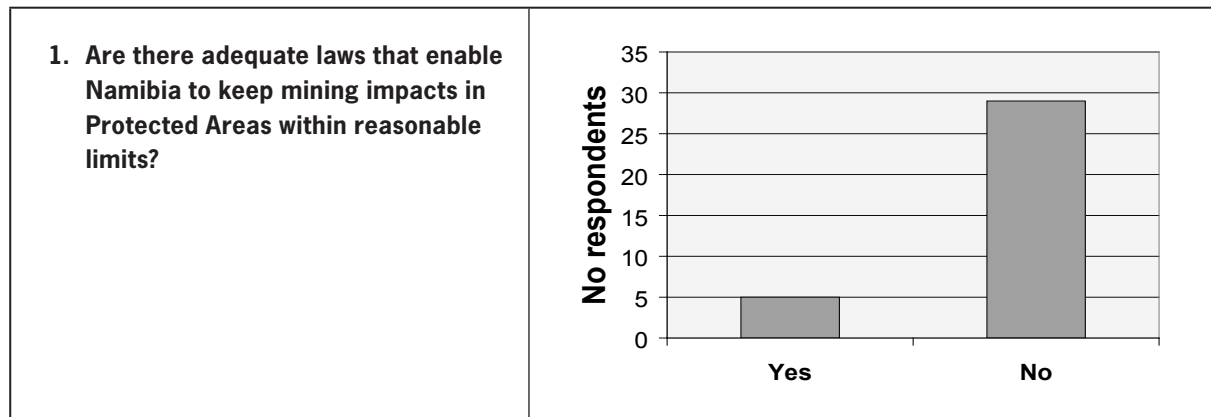
Section B – Opinions about Institutional capacity		Yes	No	n/a
1.	Does MET have adequate capacity to implement existing laws?			
2.	Is there enough cooperation between MET and MME, as well as other government institutions?			
3.	Is there enough communication and collaboration within MET, e.g. between DEA and the Parks Directorate?			
4.	Do field staff have enough input into the decision making process?			
5.	Are other relevant government sectors adequately involved?			
6.	Are other stakeholders adequately consulted, e.g. tourism sector, environmental NGOs?			

Section C – Opinions about impacts of mining / exploration	
1(a)	Can you think of any examples of positive impacts of exploration and mining in Protected Areas? <i>Please motivate your answer:</i>
1(b)	What do you think were the basic conditions that led to these positive outcomes? <i>Please explain:</i>
2(a)	Can you think of any relevant examples of negative impacts arising from exploration and mining in Protected Areas? <i>Please explain:</i>
2(b)	What reasons led to these negative outcomes (what isn't working properly)? <i>Please explain:</i>
3(a)	What are your 5 main concerns regarding exploration/mining in Protected Areas? (<i>please list in order of priority</i>)
3(b)	How could these concerns be addressed?
4	Any other comments?

Survey Results

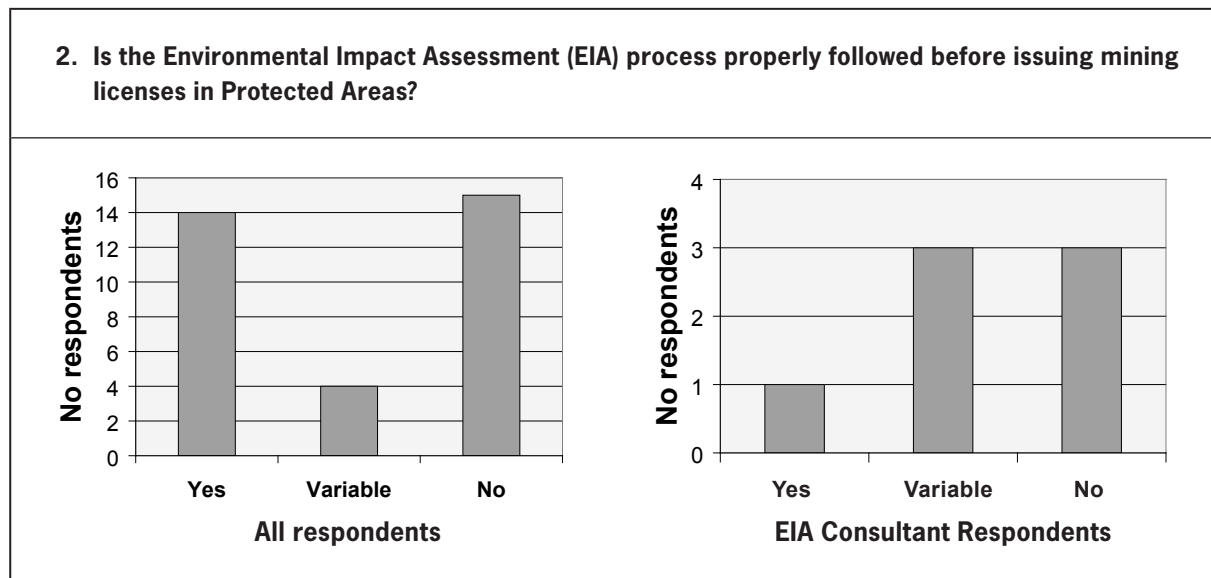
EFFECTIVENESS OF ENVIRONMENTAL SAFEGUARDS IN PROTECTED AREAS

A questionnaire was developed (Appendix 3) and people from government, NGOs, mining companies and consultant groups were interviewed to elicit their opinion regarding the effectiveness of environmental safeguards in protected areas. The results from the 42 interviews are summarized and discussed below. The questionnaire included six questions about the environmental impact assessment process in Namibia. The survey was conducted before the Environmental Management Act was promulgated, but since it has yet to be implemented, the responses remain relevant.



The majority of respondents feel that the laws in Namibia are inadequate to keep mining impacts in Protected Areas within reasonable limits. Many respondents made specific mention of the Environmental Management Act, which, though enacted, still needs to be implemented. A number of people also noted that better use could be made of existing legislation, including the Minerals (Prospecting and Mining) Act of 1992.

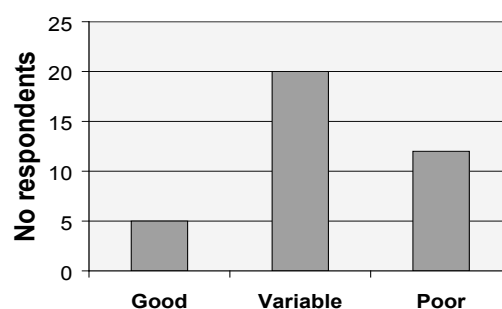
The responses highlight the fact that even if adequate legislation is available, if the principles within policies are not applied and legislation not enforced the net result will be the same as if no legislation existed at all.



The opinions of EIA consultants are shown separately, since they have more direct experience in this area. EIA consultants who work closely with the responsible agencies and companies consider the process to be unreliable – variable to poor.

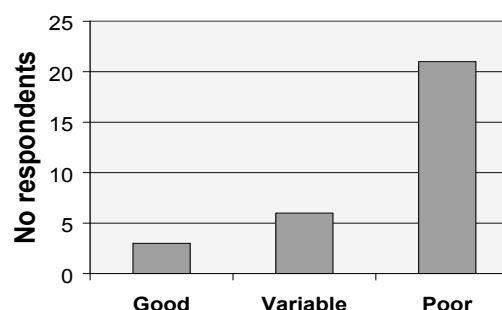
Additionally, when considering these results, it is worth keeping in mind that there may be different experiences in different areas. Where a mining company sets high standards, correct procedures are usually followed. However, these standards are not enforced by the regulatory body, so less diligent companies get away with poor practices. MET park staff is largely disempowered in this process and MET representatives are said to miss MPLAC meetings or to send junior and untrained staff. MET (DEA) provides no guidance.

3. What is your opinion of the quality of EIAs conducted in these instances?



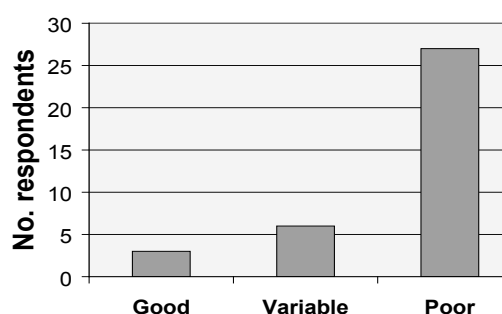
The quality of EIAs depends on the professionalism of the mining company and the EIA consultants, and varies from excellent to very poor. Review standards are often poor, since adequate standards are not set by the regulating authority (DEA). The quality of review is too dependent on individual's capacities and not enough on institutional standards, procedures and good systems. Professionalism by consultancies is not always enough to ensure that due process is followed regulators have to enforce quality control.

4. What is your opinion on the standards of the review process of EIAs for prospecting and mining?



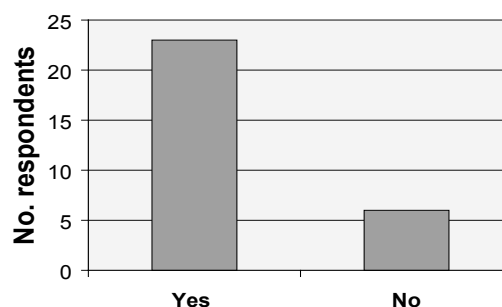
The overarching perception by respondents was that the review process is poor. In general, all EIAs whether of good or poor quality are accepted and the conditions attached to environmental clearances are generalized and rarely focus on the key issues. The review should be ensuring that the EIA has identified the issues and highlighted the best alternative and that the EMP has realistic mitigation measures in place that can be implemented and measured. A meaningful EMP cannot be developed until the design and layout of the project have been properly conceptualized. The specified actions within the EMP must relate to definite project activities and not concepts or vaguely stated alternatives. In other words, both the impact assessment and project stages must be aligned at the same level of detail.

5. What is your opinion on the standard of the monitoring and compliance to Environmental Management Plans (EMPs) resulting from the EIA process?



The respondents' perceptions of the role that regulators play in compliance monitoring is very clear. Very little monitoring is taking place and regulators do not know whether or not compliance is being enforced. This is because the MME believes that monitoring and compliance enforcement is a MET function, but it is not done by the DEA and in most cases not by DPW, who feel totally disempowered. However, this does not necessary imply that mines are not complying with the commitments in their EMPs. Where environmental issues are monitored, it is driven by the standards, integrity and commitment of the mining companies.

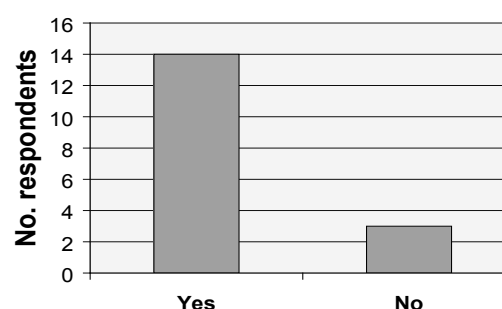
6. Do you think MET authorities are under undue pressure to approve EIAs and Environmental Management Plans for prospecting and mining?



The general feeling is that the capacity in MET is so poor that staff are unable to: adequately engage with companies at the project planning stages to help direct the EIA, public consultation process and EMP; to adequately review and assess EIAs and EMPs (or even to have them externally reviewed); and to present a rational and articulate responses, directives, and decisions. As such, the MET feels overwhelmed, does not meet time schedules and is unable to stand up to pressure from companies and MME to make a decision.

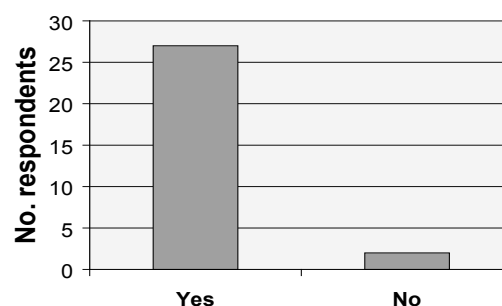
The situation is compounded when developers state that “we have been to State House and have been given the go-ahead.” It needs to be explained to both the developer and MET that State House is not giving by-pass authority to national laws and procedures. Rather, State House is saying that the proposed development sounds good in principle and that it has the support of State House to now proceed and go through all the steps that the legislature and ministries have put in place to ensure that developments are in the sustainable long-term national interest.

7. Do you think the Minister (or authorized person) of MME is under undue pressure to approve prospecting and mining licenses without commissioning an adequate EIA report from the proponent?



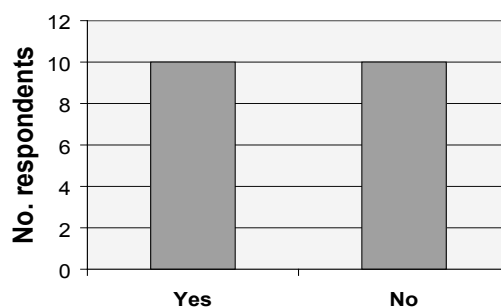
The answers to this question highlight how important it is for the MET to have legal authority to require a full EIA. Currently, instead of legal authority, representatives from both DEA and DPW supposedly sit on the EPL committee to share their views. But their opinions have often overruled, and now they do not attend.

8. Do you think that conducting an EIA should be mandatory prior to the award of an Exclusive Prospecting License in Protected Areas?



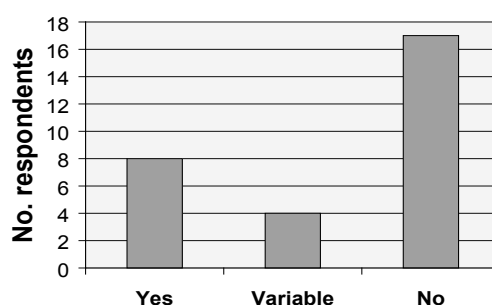
Respondents' opinions on this issue are clear. Nonetheless, companies have recently been allowed to prospect in protected areas without completing full EIAs, most notably in the Skeleton Coast Park, Namib-Naukluft Park, and the Sperrgebiet. This highlights the low level of political will to implement Namibia's policies.

**9. Do you think the granting of exploration/
mining licenses is conducted in a
professional manner?**

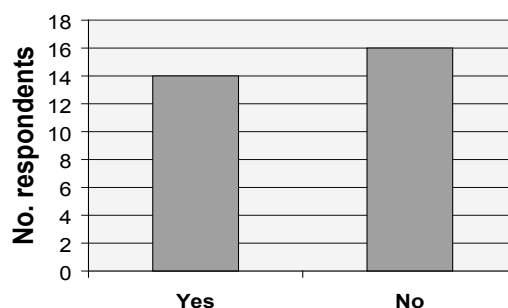


Public perceptions are balanced on this issue. The reason is probably because very few of the respondents have ever participated in this process are therefore unable to comment first hand.

**10. Do you think the authorities set
high enough standards when setting
environmental safeguards for
prospecting and mining in Protected
Areas?**

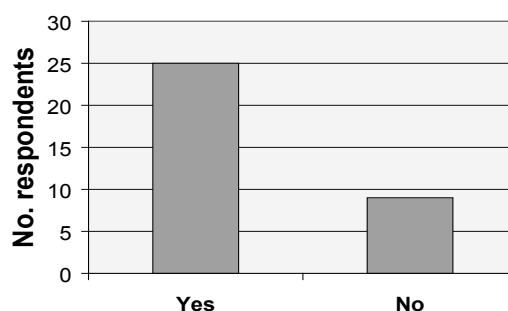


**11. Are the existing Environmental
Assessment procedures transparent?**



The general perception amongst the respondents is that the standards for environmental safeguards in protected areas are not adequate. This is likely a result of the national parks having constrained budgets that do not allow them to develop strong, multipurpose land use plans. Additionally, the parks have few resources needed to monitor the mines within their borders for compliance.

**12. Do you think that the same rules and
procedures for prospecting and mining
should apply equally in and outside of
National Parks?**



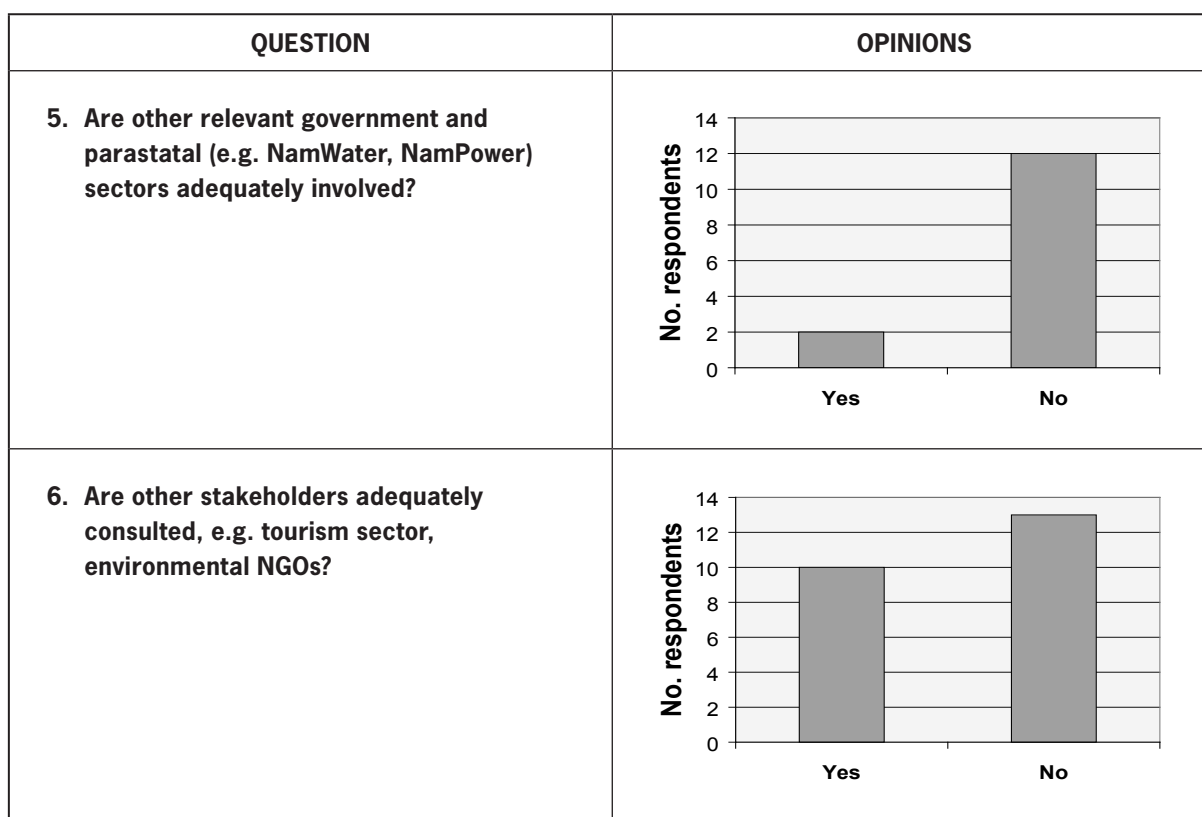
While respondents' answers to this question may be surprising, it is important to remember that many of Namibia's important biodiversity areas exist beyond the borders of National Parks, and that the number of protected areas in the form of communal and private conservancies are growing. Thus, it is important that the same policies and procedures exist for areas outside of protected lands.

INSTITUTIONAL CAPACITY

The second issue raised in the questionnaire pertained to institutional capacity. The results from this section are shown in Table 1 and discussed thereafter.

Table 1: Perceptions regarding institutional capacity

QUESTION	OPINIONS						
1. Does MET have adequate capacity to implement existing laws?	<table border="1"> <thead> <tr> <th>Opinion</th> <th>No. respondents</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>0</td> </tr> <tr> <td>No</td> <td>35</td> </tr> </tbody> </table>	Opinion	No. respondents	Yes	0	No	35
Opinion	No. respondents						
Yes	0						
No	35						
2. Is there enough cooperation between MET and MME, as well as other government institutions?	<table border="1"> <thead> <tr> <th>Opinion</th> <th>No. respondents</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>6</td> </tr> <tr> <td>No</td> <td>21</td> </tr> </tbody> </table>	Opinion	No. respondents	Yes	6	No	21
Opinion	No. respondents						
Yes	6						
No	21						
3. Is there enough communication and collaboration within MET, e.g. between the Directorate of Environmental Affairs (DEA) and the Parks Directorate?	<table border="1"> <thead> <tr> <th>Opinion</th> <th>No. respondents</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>1</td> </tr> <tr> <td>No</td> <td>15</td> </tr> </tbody> </table>	Opinion	No. respondents	Yes	1	No	15
Opinion	No. respondents						
Yes	1						
No	15						
4. Do park field staff have enough input into the EIA process?	<table border="1"> <thead> <tr> <th>Opinion</th> <th>No. respondents</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>5</td> </tr> <tr> <td>No</td> <td>14</td> </tr> </tbody> </table>	Opinion	No. respondents	Yes	5	No	14
Opinion	No. respondents						
Yes	5						
No	14						



The data illustrates the respondents' shared sentiment that the communication amongst the various Ministries and parastatal organizations is not adequate. Consultation with other stakeholders was the only instance where more than 7 of the 42 respondents felt communication was adequate. This may be a result of communication initiated by mining companies exercising public participation programs, by active NGOs, and/or by interested or affected members of the public. In addition, when such participants organize meetings and workshops, the absence of governmental organizations (unless paid to attend) does not go unnoticed.

OPINIONS OF MINING IN NATIONAL PARKS

In Section C of the questionnaire, respondents were asked to identify good and bad mining practices in national parks and to indicate what factors led to this good / bad practice. They were then asked to list the most important issues that should be addressed to ensure better management of mining in national parks. Although some of the respondents did not answer this section and others cited examples from mines located outside of national parks (e.g. Tsumeb, Rössing and Navachab), respondents provided a number of interesting and insightful comments. Because the answers for this section were qualitative rather than simple yes and no responses, it was difficult to summarize them, but the responses have been loosely categorized and tallied below.

Many respondents indicated that Skorpion Zinc was the best example of good mining practices. Namdeb, Langer Heinrich Uranium and Rössing were also mentioned more than once for good practices, but many of the respondents could not site specific examples. In all cases where mines (inside or outside of protected areas) were cited as good examples, respondents accredited it to the fact that these companies are affected by international opinion, are self regulated, implement their plans, follow due process, and/or communicate well with stakeholders.

Table 2: Examples of positive impacts of exploration and mining in Protected Areas

Comments	Number of times cited
Companies identified as demonstrating good practice	
Skorpion Zinc – follows full suite of required processes, has restricted the area of damage by fencing in their area, has a good commitment from management, good communication with government	7
Namdeb – has strict rules, good employee conduct, policies implemented, rehab programme in place)	3
Langer Heinrich Uranium – commitment during construction	3
Rössing (not actually in National Parks but seen as examples of good practice) – developed partnerships with NBRI, good procedures and commitment from management. International company.	3
Namwater on Langer Heinrich Uranium pipeline	1
AAC Prospecting	1
TeckCominco Prospecting	1
Tanzanian policy of excluding small scale miners from national parks, since they do more damage to the environment	1
Trekopje (not actually in National Parks but seen as examples of good practice) – developed partnerships with NBRI	1
De Beers Marine	1
Ambase Exploration – good, experienced re rehabilitation approach, company ethics and best practice adopted, bring in expertise to help	2
Recently most examples are positive	1
Not aware of any	6
Aspects of good practice arising from mining in national parks	
Awareness creation of the respective protected areas	1
Scientific research	3
Economic assistance for the protected area	1
Social responsibility – e.g. school tours, clean up projects	1
Economic growth, job creation	2
In general the impacts are negative but if kept to a minimum it is acceptable	1
LHU EA process made MET start thinking about development aspects in PAS	1
Desalination plant	1
Impacts are local, commitment to assist developments in other sectors	1
Better roads	1
Employment	1

Table 3: Basic conditions that led to these positive outcomes

Comments	No
Financial muscle, corporate standards and good practice, company ethics. Good business approach	5
International reputation	1
Financed by external companies not Namibian Companies	1
International awareness of NB environmental issues	1
Social responsibility and pressure from communities	2
Full commitment from the owner (with regard to finance, human resources, equipment, etc.)	2
Good on site management – procedures in place and enforced, planning integrated	2
Legislation which forces the company to provide financial help and to comply with environmental safeguards (e.g. in Botswana – government inspects regularly and gives spot fines with non compliance)	1
Often no TORs for consultants because proponents do not know what they should be producing in an EIA. Need to have better info – briefing for investors or how the process works. This is also needed for MET and MME staff.	1
Good staff in MET at the time	1
Outside pressure (not from Namibian government)	1
Good EIA and EMP	1
Good communications between mine management and Government. Willingness to collaborate	1
Conservation working with industry and not against it	1

The cases that were cited as being the worst in terms of bad practice included Langer Heinrich Uranium, the mining operations along the Orange River, and small-scale mining operations. Again, many of the respondents could not cite examples of bad practice. Some respondents attributed the bad practice to poor performance or commitment from the company in question, while others highlighted poor support and enforcement from Government as the cause.

Table 4: Negative impacts arising from exploration and mining in Protected Areas?

Comments	No
Companies identified as demonstrating bad practice	
LHU - water abstraction (lack of transparency in their payment) and energy consumption; LHU chose to go with the cheapest consultant – many gaps in the EIA, public participation; EIA process was inadequate. Poor cooperation and communication with MET	5
Along Orange River – diamond companies are bad	4
In Erongo – small miners lack rehabilitation measures, so their impact is visible Small miners along entire coast Small miners in UIS	4
Kumba exploring on Rosh Pinah mountain and Rosh Pinah tailings dam	2
Reefton Mining and Pidico	1
Most mines are examples of bad practice (oil spills, dredging, noise pollution, poor rehabilitation, no community compensation)	1
Skeleton Coast – when diamond mining commenced there was no public awareness of such a development	1
Not aware of any at the moment	3
Tsumeb – tailings dams and ground water contamination (not in a protected area)	
Navachab relocated tailings dam (not in a protected area)	1
Bannerman – exploration in the moon landscape	1
Quarry that built an illegal road from Wlotzkabarken into the Namib with no EIA or any consequences	1
Aspects of bad practice arising from mining in national parks	
Land use disturbance	2
Impacts on the environment from infrastructure development	1
Diamond industry in the past – have left a legacy	1
Rise in energy demand	1
There have been poor rehabilitation measures or they have not been implemented at all	1
Open pit mining has degraded tourism potential	1
Negative impact on tourism activities	1

Table 5: Reasons leading to these negative outcomes (what isn't working properly)

Comments	No
Negative practice from companies	
Companies do not have environmental procedures in place, lack of knowledge	2
Companies cutting costs in marginal areas (at expense of the environment)	1
Companies have no respect for the environment	1
Poor planning and coordination at exploration phase	1
Cheapskate developer butting corners. EIA is treated as a grudge purchase – therefore no real commitment	1
Negative practice from Government	
No follow up, review or monitoring after EPL is awarded	3
Political intervention and lack of strong legislation	2
No proper mitigation measure in place	1
Political pressure to not follow due process	1
No pressure from DEA to maintain standards	1
EA is reviewed, but even if found to be inadequate it is not followed up on, but is simply approved	1
Lack of manpower in MET. No consequences if a company chooses to offend	1
Park staff have no authority	1

As the main aim of this study is to identify proactive ways in which to move this debate forward, the purpose of identifying good and bad mining practices was not to shed a negative light on companies and the government. The intention is to look for gaps that need to be addressed and to solicit suggestions on how this might be achieved. A number of relevant concerns were raised by the respondents, as well as some proactive suggestions. These are summarized in the tables below.

Table 6: Five main concerns regarding exploration/mining in Protected Areas?

Comments	No
Disturbance to wildlife, poaching, loss of biodiversity, loss of ecosystem functioning	10
No policing, lack of monitoring and follow up; Slow reaction time by MET	7
Degradation of tourism potential; compromise tourist routes and NB vistas; loss of access to previous tourist areas (e.g. area where LHU now is)	5
Rehabilitation. Done poorly; need to ensure that it is done properly	5
Impact on sensitive places and landscapes	4
Irreparable damage and long term impact (e.g., extinction)	4
Need SEAs to give the bigger picture – guidance for proactive instead of reactive behaviour; no awareness about cumulative impacts	4
Poor interest in communities, better dialogue with stakeholders, throughout mine life cycle	3
Water and ground water	3
Lack of cooperation between DEA and DWP and between MET and MME. People need to be working closely together	3
Human impacts, as when the exploration team lives in the area.	2
Impact on natural resources	2
No awareness about cumulative impacts	2
Land use disturbance - lose parks that are a main contributor to the GDP	2
Mining operations have few community benefits (in specific area)	1
Increased demand on energy	1
Unsophisticated audience, no community watchdog	1
Secondary impacts due to increased mining activity	1
Loss of wilderness	1
Cutting costs in marginal operations	1
Dust pollution on vegetation	1
Radiation	1

Comments	No
Management and employees not made aware of environmental issues. No environmental guideline is in place	1
Acid drainage	1
Prohibit mining in national Parks	1
If prospecting is permitted then it is very difficult to preclude mining	1
Adequate mitigation measures in place	1
Inadequate planning during exploration. Better planning evident in mining	1
Lack of capacity, commitment and staff support in DEA. DEA needs to be sorted out	1
Lack of backbone. Need to maintain high moral / ethical/ professional standards. Do not let political pressures dictate the process	1
Operators try to push their EAs through without the proper info. Need proper briefing between MET, MME and Proponent	1
Make sure policy and legislation is comprehensive	1
Need environmental scientists that are exposed to the industry and international standards	1
Learn to strike a balance between prospecting and conservation	1
Investors need to understand sensitivity Namibian environment – need to consider economics of pristine landscapes	1
Legislation	1
People kept in the dark (at commitment level) – it is GRNs function to keep people informed	1
No active involvement of Namibia National Farmers Union in prospecting and mining licenses	1
EIA only comes at mining stage and damage from exploration has already happened	1
Get in the right specialists and ensure that the specialist study is not too brief. Proper TORs for specialists is NB	
Ongoing Review during EIAs, e.g. to ensure that specialist studies are not incorrectly interpreted	1
Need transparency	1
Areas are never mined out. Companies come back to areas when new technologies are available or if prices improve	1
Old rehabilitated areas are reopened	1
No go areas will not be respected	1
Where is the end? What is the limit to prospecting and mining in PAs. Feeling is that there is no reason to protect parks.	1
Better cooperation and communication between parks and miners	1
Need to have time to plan properly so that staff can go onto the ground and work constructively.	1
Chamber of mines must ensure all their members get ISO 14001	1

The most common concern expressed by the respondents was in regards to the loss of biodiversity, loss of ecosystem functioning, and general disturbance to wildlife. Similarly, many respondents were concerned about the lack of monitoring and follow up, as well as the impact mining will have on tourism.

Except for a couple of respondents who indicated that mining in National Parks should not be permitted, most respondents accepted that mining in National Parks would occur and that regular policing and enforcement of good environmental management plans would address many of the concerning issues.

Respondents' comments also demonstrate a shared perception of the need for capacity building. If other comments are taken into consideration, it is evident that capacity building is required within government initiations as well as mining companies. Many respondents specifically highlighted the need to sort out the problems within the DEA, including lack of trained staff, lack of commitment and accountability, and inadequate communication and coordination amongst ministries and government departments. There were also a number of comments pointing to the need for a more rigorous EIA process with proponents, consultants, and regulators understanding better what is required and ensuring that due process is followed.

Table 7: Ways these concerns be addressed

Comments	No
Policing is essential, good EMPs must be developed and management procedures must be adhered to.	6
Capacity building. If it cannot be done internally expertise must be brought in.	5
MET must have properly trained staff. DEA needs to be sorted out. DEA needs to take responsibility, not committed.	4
Improved dialogue between institutions. Lack of cooperation between DEA and DWP and between MET and MME. People need to be working closely together. Get Collaboration mechanisms working	4
Good mitigation measures and proper rehabilitation, good EMPS	4
Must meet stringent financial criteria and be credible companies	3
Some areas should be no go areas A land use map in the Sperrgebiet tried to id areas should take place – good principle, need to value economic value of both Need to identify the sensitive areas in PAs and these must be excluded from EPLs	3
Rules and regulations must be enforced	3
Mining in Parks has strategic implications so it should go before a committee. NGO and private sector should sit on the committee to ensure transparency and accountability	2
Regular independent monitoring	2
Prohibit mining in National Parks	2
Proper EIAs should be conducted and a no go option should be included in the TOR	2
Improved internal communication and operating systems	2
Develop guidelines and standards	2
Due process must be followed	2
Better dialogue with stakeholders, throughout mine life cycle	2
Human resources	2
Do not allow EPLs to be re-awarded once it has been returned	1
Community involvement	1
Proper consultative process to include aspects into park management plans	1
Decision to allow mining in a PA must be based on proper resource accounting – opportunity costs, benefits over time and sustainability issues considered	
Proper research is needed in all areas – good EIAs	1
More public awareness e.g. heap leaching is banned in USA , Canada – but not in Namibia – more info needed	1
Job creation data base	1
Certain commodities such as dimension stone should not be allowed in PAs	1
Ensure local experts are consulted or external review of specialist studies by local experts	1
Expansion of EIA requirements to cover all infrastructure or mining development anywhere near a tourist route or major landmark	1
Proponents need to spell out more clearly what they propose to do	1
Create a more proactive forum for interested parties to assist and work with small companies and help educate and work with small scale miners	1
Need partnerships with MET	1
Mines should pay either in cash or in land replacement	1
Environmental standards and EIA process must be readily available e.g. on the website	1
Need specific legislation for mining in National Parks	1

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