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# Stakeholder Influence in Promoting Environmental Sustainability in the Zambian Mining Industry

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Abstract

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## Abstract

Mining operations often cause environmental and social problems for communities. Efforts by major stakeholders in most developing countries to create and enforce an ethical framework for mining industry operations have been inconsistent. The purpose of this qualitative multiple case study, which was based on stakeholder theory, was to explore stakeholders' perspectives on the implementation of environmental policies and mining operations in Zambia. Data collection involved semistructured interviews with a purposeful sample of 24 research participants from a copper mining company operating in the Copperbelt Province of Zambia, the government ministry for mining, energy, and water development, the environmental protection agency, an environmental nongovernmental organization, local media, and the residents of the mining town. Data analysis included compiling, examining, classifying, and searching the data for patterns. The findings indicate that unsustainable practices; enforcement and technological problems; and the lack of corporate social responsibility were the principal cause of environmental problems. The recommendations include increased community involvement, awareness, and government support; enforcement of environmental laws; adoption of corporate responsibility practices; and investment in new technology. Collaboration by stakeholder groups to adequately address environmental issues and enhance environmental sustainability is also imperative. The potential implications for positive social change include providing guidance for the environmental protection agency, mining organizational leaders, and the government to alleviate environmental problems associated with mining and improve the well-being of the people.

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# Dedication

This dissertation is dedicated to my husband, Chali Nondo, for his unending love and support of my educational pursuit since fourth grade. Thank you for your encouragement and prayers, which sustained me during the doctoral journey. I would also like to dedicate my work to my children, Susan and Jonathan, who were my greatest cheerleaders throughout the program. I appreciate your prayers, understanding, and thoughtfulness when I had to spend more time on my academic work. Finally, I dedicate my dissertation to my parents, Jonathan and Veronica Mbewe, for their support and inspiration.

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May I also take this opportunity to sincerely thank all the research participants for graciously volunteering to be included in the study. The research project would have been impossible without your participation. I am also genuinely appreciative of all the support and encouragement from my husband, Chali; my children, Jonathan and Susan; family members, and peers from Walden University.

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# Chapter 1: Introduction to the Study

Mining is an industry that contributes to land disturbance, tailing disposal, and pollution that can adversely affect human health in operational areas (World Bank, 2013). Some mining organizational leaders in developing countries blatantly ignore environmental regulations in order to reduce costs and amass capital resulting in severe environmental and social problems (Maconachie & Hilson, 2013). Natural resources are finite and offer limited capacities to support life, which make it necessary to conserve the natural environment for future use (Moldan, Kova, & Hak, 2012). Extraction of resources by the mining industry must not be at the expense of environmental and social concerns that have implications for human health, according to Mkandawire and Oakes (2015).

Opportunities for improved environmental protection often exist, but weak governance prevents the attainment of positive outcomes (Edwards et al., 2014). Consequently, major stakeholders including leaders from the government, organizations, and local communities need to work together to overcome weak governance and enhance environmental sustainability (Parkes & Borland, 2012). This study was born out of the need to generate additional information to address the gap in the related literature.

This qualitative multiple case study involved exploring stakeholder influence in promoting environmental sustainability in the Zambian mining industry to help address environmental issues. The potential implications for social change arising from this study include providing guidance for organizational leaders, environmental agencies, and local communities on implementation measures that may minimize environmental degradation. Chapter 1 contains the background to the problem, problem statement, purpose of the

study, nature of the study, research question, conceptual framework, definitions, assumptions, scope of the study and delimitations, limitations, and the significance of the study.

## Background of the Study

For several decades, foreign investors have sought to capitalize on the mineral wealth in Africa (Edwards et al., 2014). Their investments in the mining industry in sub-Saharan Africa have not contributed to environmental preservation (Campbell, 2012). The result is that mining is a major threat to the environment across the continent. Mining processes cause pollution that contributes to health problems and environmental degradation that can affect people and other creatures that depend on the environment (Mihaljevič et al., 2011; Ndilila, Callan, McGregor, Kalin, & Hinwood, 2014). Mining activities thus pose significant challenges for most people in Africa.

In Zambia, a developing country in sub-Saharan Africa, mining operations have been in existence since the early twentieth century (Fessehaie, 2012). Early mining activities carried out in Zambia from the 1920s to the 1970s relied heavily on timber and involved significant clearance of trees, which led to deforestation and soil erosion (Campbell et al., 2010). In the 1990s, the Zambian government privatized state-owned mines and developed new policies that led to more foreign investment in the mining industry (Fessehaie, 2012). Satellite images indicate a decline in forest cover around 12 mining towns in the Copperbelt Province of Zambia due to deforestation (Mwitwa, German, Muimba-Kankolongo, & Puntodewo, 2012).

Since the 1990s, many media commentators have focused on the negative environmental and social impacts of mining, oil, and gas industries in Africa on local communities where mining operations are in place (Esau & Malone, 2013). Leaders at international summits and drafters of agreements have called on mining organizational leaders to find ways to prevent the destruction of natural resources and promote environmental sustainability as well as improve social welfare (Esau & Malone, 2013). General public and environmental regulatory agencies in most parts of the world are also increasingly concerned about the large-scale pollution caused by mining activities (Blight, 2012). In this context, organizational leaders need to find ways of being economically competitive, socially responsible, and environmentally sustainable to meet the needs of stakeholders (Orlitzky, Siegel, & Waldman, 2011).

Mining-related environmental and social problems in Zambia are partly due to unsustainable organizational practices and irresponsible behavior by some organizational leaders. The absence of an effective framework for integrating social and economic aspects to minimize environmental and social problems also contributes to these adverse outcomes (Krageland, 2009; United Nations, 2012). In most African countries, poor remedial measures have increased environmental problems. The inadequate support from the Zambian government prevents the implementation of environmental laws and regulations due to a weak regulatory framework (Global Environmental Institute, 2010; World Bank, 2011). Zambia's weak environmental governance record is reflected in its low ranking on the 2008 International Environmental Sustainability Index (World Bank, 2011).

Organizational leaders could improve the welfare of the public by adopting environmental preservation measures. According to Campbell (2012), organizational leaders should focus not only on the provision of revenue, employment, and profit maximization but on the well-being of the environment and society. Environmental responsibility is an important part of corporate social responsibility (Orlitzky et al., 2011). In the past 26 years, researchers studying corporate social responsibility that include environmental aspects have examined economic and financial benefits for the organization without considering the implications for the stakeholders (Moura-Leite & Padgett, 2011). Consequently, Maconachie and Hilson (2013) recommended conducting research to identify the factors that influence organizational leaders to respond to the needs of communities.

A study that focuses on how stakeholders influence the implementation of environmental policies and mining operations to foster environmental sustainability in Zambian could address the gap in the literature regarding stakeholder influence. Research findings may also provide stakeholders with insight about addressing environmental problems for the benefit of the current and future generations. Potential implications for positive social change include the generation of knowledge on environmental sustainability that organizational leaders and local communities may use to address environmental issues.

## Problem Statement

The general problem is increased environmental degradation from human and organizational activities with 3.7 million global deaths attributed to ambient air pollution

in 2012 (World Health Organization, 2014). Mining is one of the industries that contribute to environmental problems including land degradation and pollution that can have a severe impact on people (World Bank, 2013). Stunting of forests and natural vegetation, declining wildlife, and death of aquatic life are other environmental effects of mining activities (Mwitwa et al., 2012). Mining operations seem to cause environmental degradation that affects human life and biota.

The specific problem is inconsistent effort and limited involvement by major Zambian stakeholders in creating and enforcing an ethical framework for mining operations (Chifungula, 2014; Nachiyunde, Ikeda, Okuda, & Nishijima, 2013). The report of the country's auditor general revealed that sulfur dioxide released into the environment from mining activities was 155% higher than Zambia Environmental Management Agency (ZEMA) minimum standards (Chifungula, 2014). The 2014 Environmental Performance Index (EPI) also indicated poor air quality that is a threat to human health and ecosystems in the country (Hsu et al., 2014).

## Purpose of the Study

The purpose of this qualitative multiple case study was to gain an in-depth understanding of how stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability in Zambia. A purposive sample of 24 research participants was drawn from a mining company; the Ministry of Mines, Energy, and Water Development; ZEMA; a nongovernmental organization, local media, and local residents living within the vicinity of the mine. Data collection included the use of semi-structured interviews with open-ended questions to

obtain detailed information. One-on-one interviews were conducted with four organizational leaders of a mining company and four representatives from each stakeholder group.

## Research Questions

The research question signifies the aspects of an inquiry that a researcher wants to study; it is useful in identifying what is of most interest and guiding a researcher in collecting relevant data (Miles, Huberman, & Saldana, 2014). The central research question for this qualitative multiple case study was: How do stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability in Zambia?

## Conceptual Framework

I used Freeman's (1984) stakeholder theory as my conceptual framework. The focus of this theory is the relationship between an organization and identified stakeholders. More specifically, researchers using this theory analyze individuals or groups of people who can impact an organization and how organizational leaders react in response to these individuals or groups to manage effectively (Freeman, 2010). Stakeholder groups include shareholders, employees, suppliers, customers, government, nongovernmental organizations, competitors, activists, media, and local communities (Ayuso, Rodriguez, Garcia-Castro, & Arino, 2014).

Stakeholder theory is also a suitable lens for considering the perspectives of stakeholders and the value sought by the stakeholders that extend economic value to include social environmental and other benefits (Harrison & Wicks, 2013). Moreover,

this theory also highlights the significance of effectively evaluating and managing relationships with stakeholders (Kim & Nam, 2012). Organizational leaders should consider the needs of stakeholders according to stakeholder theory.

Organizational leaders who explicitly consider the interests of the many different stakeholders in their decision-making also make efforts to engage with essential stakeholders to understand their concerns and needs (Ayuso et al., 2014). Organizational leaders who balance the concerns of their different stakeholders in the decision-making process may also be more prepared to address long-term reputation problems than those who focus on attaining short-term returns on investments (Orlitzky et al., 2011). The corporate leaders should consider the needs of stakeholders as the stakeholders are part of society and the environmental and social problems caused by organizational activities affect some stakeholders.

Lack of environmental sustainability is a major global challenge, which is made evident by extreme weather conditions, climate change, ozone depletion, food, and water security issues (Parkes & Borland, 2012). Environmental sustainability is an important concept as it could help people in society in addressing environmental problems attributed to mining operations. Moldan et al. (2012) asserted that environmental sustainability involves maintaining ecosystems and global life-supporting systems at an appropriate level for the continued supply of nature's services for the benefit of the present and future generations.

It is thus imperative to protect the environment for it to continually provide the required services and resources to sustain all forms of life. A sustainable world involves

the flourishing of life on earth over an indefinite time frame. Such flourishing includes human ideas and environmental well-being built on the principles of generational justice where future generations can benefit from the environment (Cliton, & Amran, 2011). Organizational practices and other human activities that promote environmental sustainability might thus help in alleviating environmental problems and thereby improving the welfare of people and the environment.

## Nature of the Study

I believe that a qualitative research method was the appropriate approach for addressing the research problem and answering the research questions for this study. Qualitative research is a discovery-oriented approach, which is useful in exploring, capturing. and communicating an in-depth understanding of issues or phenomena that are not well understood (Johnson & Bloch, 2015). Qualitative researchers elicit multiple meanings related to participants' perceptions as well as a detailed understanding of a particular phenomenon (Stake, 2010). My use of a qualitative research method involved the use of open-ended questions to facilitate the acquisition of detailed information from research participants. Using open-ended questions also gave me flexibility in interviewing participants.

A quantitative research method was not suitable for this study because it does not allow for the use of open-ended questions that might offer an in-depth understanding of the influence of stakeholders. Researchers that utilize the quantitative approach use closed-ended questions, a pre-constructed standardized instrument, systematic measurements, mathematical models, and statistics to analyze their data (Yilmaz, 2013).

The quantitative method also involves investigating correlations, cause and effect relationships among variables, hypotheses testing, and conducting experiments (Arghode, 2012). The quantitative aspects were not the goals of the study that required obtaining detailed information from multiple stakeholders in the natural setting.

The qualitative multiple case study design was most fitting to collect relevant data from different stakeholder groups. Case study research design is ideal for contemporary cases, exploratory studies, and obtaining a holistic and real-world perspective in studying organizational and managerial processes (Yin, 2014). The data sources were organizational leaders and different stakeholders in a real-life contemporary context. The case study approach involves collecting data from multiple sources (Iacono, Brown, & Holtham, 2011) that was necessary to have a robust understanding of the influence of stakeholders in promoting environmental sustainability.

In considering the other research designs, the phenomenological research design or grounded theory were not suitable for the study. The phenomenological design focuses on providing an in-depth understanding of a particular phenomenon based on the lived experiences of the participants (Yuksel & Yildirim, 2015). In phenomenology, the researcher seeks to understand the lived experiences of the individuals but the focus of this study was to gain a holistic understanding of the involvement of different stakeholders in a contemporary context.

Similarly, grounded theory research design was not ideal for the study. Grounded theory is a systematic approach where the researcher compares many concepts articulated by the research participants through constant comparative analysis during research to

develop a theory (Glaser & Strauss, 2009). The purpose of the study was not to generate a theory as it could be time-consuming and expensive to attain theory saturation through continuous data collection and analysis. The multiple case study approach was thus appropriate for the study.

## Definitions

*Corporate social responsibility*: Organizational leaders' practices in meeting economic, environmental, ethical, and social obligations towards communities (Park & Ghauri, 2015).

*Environmental sustainability*: Maintainence of ecosystems and global life-supporting systems at an appropriate level for the continued supply of nature's services (Moldan et al., 2012).

*Stakeholders*: Individuals or groups of people who can affect or are affected by the attainment of organizational objectives (Freeman, 2010).

*Stakeholder groups*: Owners or shareholders, employees, suppliers, customers, government, nongovernmental organizations, competitors, activists, media, and people in the local communities (Ayuso et al., 2014).

*Stakeholder influence*: The pressure that stakeholders may exert on organizational leaders to adopt organizational practices that promote environmental sustainability.

*Stakeholder theory*: An approach concerning individuals or groups of people that can impact an organization and how organizational leaders behave in response to these individuals or groups to manage effectively (Freeman, 2010).

## Assumptions

There were three assumptions in conducting the study and relating to obtaining information from the research participants. The first assumption was the provision of honest responses by the organizational leaders and other stakeholders during interviews. The other assumption was that the information in the public documents was based on factual data while the third assumption was that the information contained in the environmental reports was accurate and not misrepresented or underreported.

## Scope and Delimitations

The scope of the study was mining organizational leaders in the Copperbelt Province of Zambia, and the major stakeholders in the mining industry. The mining organization was ideal as organizational processes that involve extracting resources from the natural environment and releasing pollutants into the environment occur within this industry. A purposive sample of 24 research participants provided information related to the research problem. The research participants were four mining organizational leaders, and four representatives from each stakeholder group that included the Ministry of Mines, Energy, and Water Development, Zambia Environmental Management Agency, the local media, the local community residing near a mine, and a nongovernmental organization. Public document review was another source of data.

The study involves a mining organization as the focus of the study is in the mining industry based on the research gap that indicates the need for research in the extractive industries of developing countries. Four leaders in a mining company and four representatives from each stakeholder group of the mining organization will be the source

of data through one-on-one semi-structured interviews. The stakeholder groups include those from the Ministry of Mines, Energy, and Water Development, Zambia Environmental Management Agency, the local media, the local community, and a nongovernmental organization. The stakeholders associated with environmental aspects could help in providing more insights on environmental issues.

## Limitations

The case study design that centered on a mining organization and its stakeholders limits the external validity of the study and the generalizability of the research findings to other organizations. The purposeful sampling approach utilized in collecting data has an inherent bias and the research results from the sample cannot be generalized to the larger population (Acharya, Prakash, Saxena & Nigam, 2013; Patton, 2002). Rich and dense description of the data helps in enhancing the transferability of the study (Thomas & Magilvy, 2011). I thus provided detailed accounts of the research process and used NVivo software.

An audit trail facilitated by NVivo and reflexivity might enhance the dependability and confirmability of the study (Houghton, Casey, Shaw, & Murphy 2013). The information obtained through semi-structured interviews with the research participants may be inaccurate or misleading as the participants might have not be truthful in answering some questions. Some of the research participants may have omitted important information while others might have purposefully exaggerated certain information and provided misleading responses. The review of public documents from

Zambia Environmental Management Agency may also have limitations regarding documenting errors.

## Significance of the Study

The study is essential since mining operations contribute to a wide range of environmental and social problems such as global warming, air pollution, land degradation, contaminated water, and health issues that could be more devastating for the future generations (Jordan & Abdaal, 2013; Mkandawire & Oakes, 2015). Recommendations for commitment in enhancing environmental sustainability by all the major stakeholders (Parkes, & Borland, 2012), also made it necessary to explore stakeholder influence to gain a robust understanding regarding their influence in the implementation of environmental policies and other issues relating to environmental sustainability. The findings from the study may be valuable to the different stakeholder groups including the areas relating to practice, theory, and social change.

### Significance to Practice

The usefulness of the research outcome might include the professional applications of the findings and recommendations in developing strategies that could alleviate environmental problems. The generated information might also provide more enlightenment regarding the interests of the stakeholders, and how organizational leaders and stakeholders could collaborate to promote environmental sustainability. The perceptions of different stakeholders concerning the activities of extractive industries might influence the development of organizational strategies by the corporate leaders (Maconachie & Hilson, 2013). The government and environmental protection agencies

may apply the research findings in the development of environmental policies and regulations that might more adequately address environmental issues.

**Significance to Theory**

The existing literature on environmental problems has not included the role of stakeholders in promoting environmental sustainability in Zambia. Therefore, the study helped in addressing the research gap in the field of leadership and organizational change. The research findings revealed additional information about how the different stakeholders influence the activities of mining companies in Zambia. The information might also add to the existing body of literature concerning environmental responsibility, leadership and organizational change issues, stakeholder theory, and how organizational leaders may effectively manage the relationships with the different stakeholders to protect the environment. Additionally, organizational change and leadership scholars may utilize the information to develop new models of change or to conduct future research.

**Significance to Social Change**

The research findings have potential implications for effecting positive social change in the lives of individuals and the local communities around the mining areas in Zambia. Positive social change is possible as the study included collecting data that may help in addressing environmental problems that are known to cause health problems and other social issues (Jordan & Abdaal, 2013). The people residing within the vicinity of the mine might benefit from the application of the research findings to prevent pollution, environmental degradation, and other aspects that cause health and social problems. The

research results might also reveal the focal areas to address to make a positive difference in the affected communities.

The significant information from the study includes the need for the local communities and other stakeholders to be actively involved in influencing mining operations and confronting environmental problems that concern them. The participation of the local communities, civil society actors, government agencies, and other stakeholders is crucial in addressing social and environmental issues (Littlewood, 2015). The development and adoption of environmental sustainability practices could contribute to environmental protection and hence sustain life for the benefit of the present and future generations.

## Summary and Transition

Mining activities in Zambia contribute to environmental problems that affect the people living around the mining areas. There is little compliance with the regulations and international standards by the employees and organizational leaders of the mining corporations as well as the lack of enforcement of the national laws by the environmental agencies in Zambia (Mwitwa et al., 2012). The purpose of this qualitative multiple case study was to gain a robust understanding of how stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability in Zambia.

In Chapter 1, I discussed the background to the problem, the problem statement, the purpose of the study, the nature of the study, and the research question. The conceptual framework, definitions, assumptions, scope of the study, limitations,

delimitations, and the significance of the study are also vital elements of the first chapter. Chapter 2 contains the literature review related to stakeholders, organizational activities, and environmental sustainability

# Chapter 2: Literature Review

Globally, people encounter unprecedented and complex environmental problems that include persistent pollution, climate change, ozone depletion, emerging diseases, and the decline and extinction of species (Kabai, 2013; Kinzig et al., 2013). In Zambia, major stakeholders have had limited involvement in creating and enforcing an ethical framework for mining operations (Chifungula, 2014; Nachiyunde et al., 2013). Environmental problems have a cumulative effect on society thereby making it necessary to explore ways of minimizing problems. The purpose of this qualitative multiple case study was to gain an in-depth understanding of how stakeholders influence the implementation of environmental policies and mining operations in Zambia.

The first section of the literature review contains my strategy for searching the literature from different databases and other sources. The conceptual framework related to stakeholder influence and environmental sustainability is then presented. The next section is a discussion of mining organizational practices, the impacts of mining activities on the environment and local communities, and the role of the government in promoting environmental sustainability. I also highlight stakeholder influence and mining organizational activities and environmental sustainability challenges in Zambia.

## Literature Search Strategy

My search for literature involved using multiple sources to obtain relevant information. Walden University Library was the primary means by which I accessed different databases. Google Scholar was also useful in searching for the literature.

The business and management databases that I used were Business Source Complete, ABI/INFORM Complete, Emerald Management, and SAGE Premier. Multidisciplinary databases included ScienceDirect, ProQuest Central, and Academic Search Complete. In searching for relevant literature, I focused on peer-reviewed journals and reports using the following keywords:

*stakeholders*, *stakeholder theory*, *stakeholder influence*, *stakeholder expectations*, *stakeholder pressure*, *environment*, *environmental degradation*, *environmental damage*, *environmental sustainability*, *environmental protection*, *environmental management*, *environmental responsibility*, *environmental policies*, *environmental laws*, *environmental regulations*, *corporate social responsibility*, *corporate responsibility*, *mining industry*, *mining organizations*, *mining processes*, *mining in Zambia*, and *mining in Africa*.

Peer-reviewed materials were my primary source of information and accounted for 97% of sources while reports and textbooks constituted 3% of sources. Books provided information by subject matter experts on stakeholder theory while reports highlighted the problem of environmental degradation in Zambia. The peer-reviewed materials contain different kinds of information related to stakeholder influence, environmental sustainability, and other aspects related to my study.

## Conceptual Framework

The conceptual framework focused on the relationship between an organization and the identified stakeholders as exemplified in stakeholder theory. Pioneered by Freeman, stakeholder theory is an approach where the emphasis is on the need for organizational leaders to serve the interests of shareholders and also take into account a

range of benefits for the other stakeholders (Hörisch, Freeman, & Schaltegger, 2014). Accordingly, stakeholder theory involves considering individuals or groups of people who can affect an organization and how organizational leaders behave in response to such individuals or groups (Freeman, 2010).

For years, stakeholder theory has become increasingly important in most fields. For instance, researchers in a broad range of disciplines including management, law, health care, and public policy have used the theory to highlight that organizations have stakeholders whom organizational leaders should proactively consider for organizational effectiveness (Harrison & Wicks, 2013). According to Kim and Nam (2012), the theory centers on how organizational leaders could effectively evaluate and manage the relationships with the stakeholders (Kim & Nam, 2012). Stakeholder theory thus reinforces the significance of creating value for different stakeholders for an organization to be successful.

**Stakeholders**

Stakeholders are the people affiliated with an organization who might influence organizational activities. They are the individuals or groups of people who can influence the attainment of organizational objectives and might also be affected by organizational activities (Freeman, 2010). Stakeholders are also organized interest groups or individuals who have a stake or interest in a certain issue or who might be affected by the outcome of a particular policy (Vasileiadou & Tuinstra, 2013). Some of the stakeholder groups include the owners or shareholders, employees, suppliers, customers, government,

nongovernmental organizations, competitors, activists, media, local communities, and advocacy groups that protect the environment (Athichitskul, 2011; Ayuso et al., 2014)

Figure 1 depicts some of the organizational stakeholder groups that are part of the natural environment. I developed the figure based on the stakeholders identified by Ayuso et al. (2014) as well as Sekerka and Stimel (2012). The natural environment offers the fundamental way for organizations to exist and for leaders and employees to conduct their activities (Sekerka & Stimel, 2012). The environment facilitates organizational operations and people depend on the environment for their survival. The natural environment is thus an important aspect to consider besides organizational stakeholders.

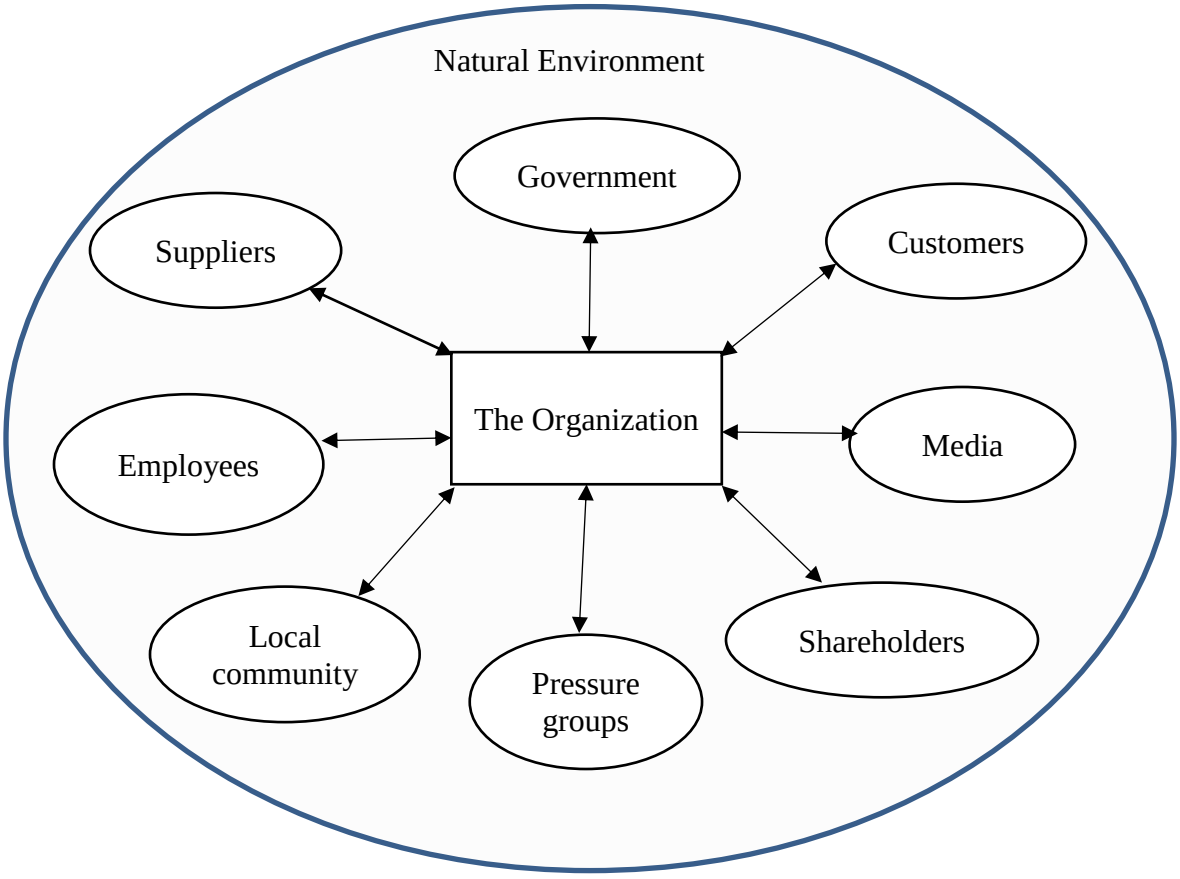


*Figure 1*. The organization and its stakeholders in the natural environment.

Organizational leaders should consider their responsibilities to their employees, suppliers, customers, the community, the environment, and other relevant stakeholders needed for the creation of value and the organization's continued existence and viability (Seay, 2015). The leaders within the organization should strive to meet the needs of the major stakeholders that could impact organizational activities. The stakeholder groups have different expectations and have a significant role in the success of an organization. For instance, employees provide the required human capital while the suppliers provide or supply the necessary goods and services to sustain organizational operations.

Klocek, Dayib, Mukherjee, and Crespo (2014) justified the development of supplier diversity programs as they enable the members of an organization to give back to the community through the provision of employment while obtaining benefits for the organization in the form of the goods and services that the suppliers provide. Similarly, the competitive market makes it imperative for corporate leaders and employees to develop and sustain good relations with customers to promote customer loyalty for the future survival of the organization (Ullah & Yasmin, 2013)**.** The customers also rely on organizational leaders and employees to meet their needs and wants.

There are other stakeholder groups that organizational leaders should consider in their activities such as the media, pressure groups, and the government. The media reports on organizational practices, the pressure groups work to influence the adoption of measures that protect the interests of people while the government is responsible for developing and enforcing laws and regulations **(**Féres & Reynaud, 2012; Spangler & Pompper, 2011). It is thus necessary to consider the interests and concerns of the different

stakeholders while pursuing organizational goals and objectives. Organizational leaders could acquire some knowledge of their shareholders and other stakeholders to manage the different groups effectively

According to Harrison and Wicks (2013), stakeholders measure the overall satisfaction from an organization from different dimensions, including an organization's environmental performance, financial returns, and perceived impact on the community or environment. Consequently, organizational leaders who balance the concerns of their different stakeholders in the decision-making process may also be more prepared to address long-term reputation problems than those that focus on attaining short-term returns on investments (Orlitzky et al., 2011). Organizational strategies could thus include the aspects relating to environmental protection, and obtaining economic gains while protecting the interests of the local communities and other stakeholders.

Investments in environmental protection depend on many factors within most organizations. Some organizational leaders are of the mindset that the economic benefits that support profitability determine the legitimacy of investing in environmental preservation practices (Heuer, 2012). Organizational leaders may invest in environmental responsibility if they believe that the investment will create more wealth for the shareholders and tend to avoid investments when there is a financial risk in attaining a sustainable future (Cordeiro & Tewari, 2015; James, 2013). From this perspective, the organizational leaders' primary objective is to meet the interests of the shareholders.

The underlying assumption of the shareholder perspective that involves profit maximization is that the shareholders take risks in investing in the organization and thus

organizational leaders should protect their interests (Gnan, Hinna, Monteduro, & Scarozza, 2013). The shareholder perspective thus focuses on value maximization for the investors while the stakeholder view emphasizes maximizing value for the shareholders and all other entities affected by organizational activities, including the natural environment (Sekerka & Stimel, 2012). In considering the stakeholder perspective, management approach requires categorizing stakeholders based on their importance as organizational leaders cannot simultaneously attend to the needs or interests of the multiple stakeholders (Emerson, Alves, & Raposo, 2012).

Organizational leaders could strive to find ways of addressing the needs of their major stakeholders to enhance organizational effectiveness. The demands of the different stakeholder groups vary but the common interests include environmental protection, social justice, and economic stability that are prioritized differently by the various stakeholders (Seay, 2015). The common interests of the stakeholders might be integrated in organizational strategies to develop and maintain good relations. Organizational leaders who develop strong relationships with various economic and non-economic stakeholders might develop proactive environmental strategies that deal with environmental and social issues (Delgado-Ceballos, Aragon-Correa, Ortiz-de-Mandojana, & Rueda-Manzanares, 2012; Esau & Malone, 2013).

Stakeholder governance approach that involves a high integration of economic, social, and environmental performance is consistent with corporate involvement in environmental sustainability that focuses on the impacts of pollution on the environment and preserving resources for future generations (Heuer, 2012). Stakeholder theory is

strongly associated with corporate social responsibility as it provides an appropriate theoretical framework for analyzing the relationships between an organization and its stakeholders in society (Ayuso et al., 2014). Corporate social responsibility is thus an essential aspect that is also related to environmental sustainability.

**Corporate Social Responsibility**

Corporate social responsibility is an important concept that has been evolving over time. The idea developed after the Second World War, became more important after the 1960s, and today, most academic and practitioner communities around the world show more interest (Carroll & Shabana, 2010). There are more than 6000 organizations from 135 various countries that have embraced the global compact policy of the United Nations that involves the alignment of organizational activities with socially responsible standards (Du, Swaen, Lindgreen, & Sen, 2013). Corporate social responsibility is the responsibility that organizational leaders undertake to maximize shareholder wealth and the ethical values that govern the relationship established between the members of an organization and its stakeholders (Kindcaid, 2012).

Organizational leaders are expected to act responsibly towards their stakeholders thereby validating the link between stakeholder theory and corporate social responsibility. Following the 1992 Rio Earth Summit, there were increasing suggestions for organizational leaders to have a significant role in addressing environmental and social problems through corporate social responsibility (Littlewood, 2015). It is thus incumbent upon organizational leaders to initiate and promote corporate social

responsibility to adequately address a wide array of concerns of all the major stakeholders.

Other authors have also alluded to the significance of corporate leadership involvement in dealing with environmental and social issues. Corporate social responsibility signifies that corporate leaders have responsibilities that go beyond making profits to include practices that meet economic, environmental, ethical, and social obligations towards the community (Ayuso et al., 2014; Idemudia, 2014; Kouikoglou & Phillis, 2011; Park & Ghauri, 2015). The other aspects of corporate social responsibility include embracing the principle of data transparency relating to organizational policies and performance as well as working towards creating strategies that promote sustainability (Kouikoglou & Phillis, 2011). Corporate social responsibility is thus crucial as it entails the initiatives that corporate leadership undertakes for the welfare of society and the environment.

Despite the widespread calls for corporate social responsibility, some organizational leaders in developing countries do not implement their corporate social responsibility programs. Some evidence indicates that corporate social responsibility of the multinational corporations in the extractive industries of developing countries is mostly about promoting the company image without making any real difference in developing policies that protect the natural environment or the local communities (Pesmatzoglou, Nikolaou, Evangelinos, & Allan, 2014). Idemudia (2014) also inferred that the absence of sufficient empirical evidence concerning the effectiveness and

impacts of corporate social responsibility in Africa makes it difficult to reach a logical conclusion regarding the usefulness of corporate social responsibility in Africa.

There is increased pressure for organizational leaders to implement corporate social responsibility practices as stakeholders are concerned about environmental pollution, financial transparency, treatment of workers and other issues that affect society and the environment (Christensen, Mackey, & Whetten, 2014). Furthermore, Strand (2011) supported the assertion that most people desire organizational leadership that implements corporate social responsibility principles, especially following corporate scandals, social, environmental and other global problems. For instance, the oil spills in the Gulf of Mexico by British Petroleum Company (BP) in 2010 resulted in higher demands for organizational leaders to act ethically and consider the effects of their actions on the environment (Delgado-Ceballos et al., 2012).

The persistent pressure from the stakeholders might eventually force some organizational leaders to adopt practices that could promote societal and environmental well-being. The corporate leaders might also understand their moral and legal responsibilities that they have towards the larger societal issues. Spangler and Pompper (2011) conducted a study in an oil company based in the United States in which they inferred that gaining trust from the public and the media, collaboration, and giving back to the community members are some of the important aspects in developing corporate social responsibility. Organizational leadership may thus view corporate social responsibility as a way of addressing the concerns of the community and promoting the reputation of the organization through positive publicity.

Given the strategic importance of corporate social responsibility, organizational leaders could create a culture of commitment and awareness among all organizational members to be accountable in promoting human welfare and environmental protection for the betterment of society. Some organizational leaders integrate corporate social responsibility values in their organizational strategies and practices with an intention of meeting societal needs and sustaining positive relationships with the stakeholders (Spangler & Pompper, 2011). Organizational leaders could also incorporate corporate social responsibility in the core business activities and decision-making by embracing environmental, economic and social aspects of sustainability in a holistic way (Diale, 2014). Organizational strategies might involve including elements that augment corporate social responsibility.

Ethical values might influence organizational activities relating to corporate social responsibility. Some scholars view management ethics as a part of corporate social responsibility that has become a vital component as people in society keep making constant calls for organizational leaders to not only make profits but also be ethical and socially responsible (Jamnik, 2011). Ethical leadership is thus increasingly important in addressing environmental and social concerns. Abend (2013) affirmed that the field of business ethics materialized in the early twentieth century during the formation of business schools in major universities such as University of California and Yale University in 1904 to promote social progress and welfare.

Examples of ethical behavior include environmental preservation, facilitating the health and safety of employees, and improving the welfare of the community (Seay,

2015). Ethical leadership might thus facilitate the enhancement of societal well-being. Moreover, ethical leaders who model the desired ethical behavior provide a consistent message regarding the norms and values of appropriate behavior that employees may emulate to promote proper conduct within an organization (Mayer, Aquino, Greenbaum, & Kuenzi, 2012). Organizational ethical conduct could also attract and retain employees, foster open communication, innovation, and augment relationships with the customers, suppliers and other stakeholders (Su, 2014).

Conversely, public perceptions of any organizational misconduct or unethical behaviors might result in lawsuits, losing valuable customers, and more pressure from the government and other interest groups for ethical conduct that could prove costly to the organization (Jamnik, 2011; Mayer et al., 2012; Su, 2014). There are validations that ethical leadership is one of the leadership styles that encourage corporate social responsibility and focuses on nonfinancial leader effects, environmental sustainability, and social responsibilities towards society (Christensen et al., 2014). Ethical behavior might thus help in protecting the image of an organization, sustaining future operations and protecting the welfare of society and the environment.

Notably, corporate social responsibility is progressively important in the mining industry due to the nature of its processes that have adverse impacts on the environment and the people around the mining areas (Kepore & Imbun, 2011). Ongoing and broader stakeholder identification, prioritization, stakeholder engagement, and feedback are vital factors to consider by senior management when implementing corporate social responsibility practices (Dobele, Westberg, Steel, & Flowers, 2014). Organizational

leaders that implement corporate social responsibility programs that consider economic objectives and the social needs of society could gain customer loyalty and improve the relationships with other stakeholders (Peloza, & Shang, 2011). Environmental sustainability initiatives could also improve the well-being of the people.

**Environmental Sustainability**

Environmental sustainability is imperative for the good of society and preservation of the natural environment. Environmental sustainability involves maintaining nature's services at an appropriate level and consuming resources with minimal adverse effect, for the continued supply of nature's services to support life (Moldan et al., 2012; Morik, Bhaduri, & Kargupta, 2012). The minerals in the environment are finite, and their exhaustion and mismanagement could present significant challenges for the current and future generations (O'Faircheallaigh, 2015). James (2013) also affirmed that sustainability is a broad concept that integrates numerous aspects such as responsibly exploiting and safeguarding natural resources that include minerals, water, oil and other elements in the environment.

The unsustainable human and organizational practices pose significant risks to the environment. Environmental degradation through unsustainable practices results in economic and social problems as the effects on the environment such as land degradation might fail to support plant growth for human sustenance and the depleted resources from the environment might affect organizational activities (Athichitskul, 2011). The lack of environmental sustainability is one of the biggest challenges in society as environmental problems resulting from organizational activities have enormous implications for

ecosystem and earth systems that negatively impact both people and other nonhuman species (Moldan et al., 2012; O'Brien, 2013; Parkes & Borland, 2012).

Verma (2014) also asserted that global warming and acid rain are a result of organizational processes, leading to the increased need for environmental sustainability to preserve the environment. Furthermore, the deterioration of the natural environment in the form of climate change has jeopardized human health (Brandstedt & Bergman, 2013). Consequently, there is a need to address the anthropogenic consequences that include land degradation, climate change, global warming, acid rain, and resource depletion by implementing mitigation plans that focus on minimizing environmental impacts resulting from human activities (Bondarchik, Jabłonska-Sabuka, Linnanen, Kauranne, 2016). A healthy environment might improve the quality of life and the creation of environmental sustainability awareness could be beneficial.

The development of organizational strategies that include the integration of ecological and social sustainability concepts into the governance of mining development is imperative to minimize environmental problems (Martin, Diaz, & San Roman, 2014; Petrova & Marinova, 2013). The evaluation of the impacts of mining development on the environment and the people in the surrounding communities could be a significant factor to consider in meeting the demands of the stakeholders. There is increasing external pressure from governments, nonprofit organizations, and international societies for organizational leaders to employ organizational practices that are environmentally and socially responsible (Kim & Nam, 2012).

There are inferences that environmental strategies are the organizational leaders' efforts to meet the environmental demands of the stakeholders based on stakeholder theory (Garcés-Ayerbe, Rivera-Torres, & Murillo-Luna, 2012). As a result, there is environmental sustainability orientation in some organizations that involves integrating environmental concerns and practices into organizational strategies and operations (Roxas & Coetzer, 2012). Additionally, it is essential to sustain and improve the quality of life on earth by using unique skills and changing the practices within organizations to promote environmental sustainability (Dilchert & Ones, 2012). Organizational leaders could demonstrate their willingness in promoting environmental sustainability through organizational initiatives that include sustainability reports.

**Sustainability reports.** Sustainability reports are also called environmental reports or corporate social and environmental reports that are one of the significant ways in which organizational leaders respond to the demands of the stakeholders (Joensuu, Koskela, & Onkila, 2014; Seay, 2015). The purpose of the sustainability report is to show how the members of an organization contribute to societal welfare through the implementation of the environmental and social policies while pursuing organizational interests (Gazzola & Meo, 2011; James, 2013). Sustainability reports also indicate corporate financial information, cleaner production practices, environmental management, and other social responsibility initiatives that are made available to the stakeholders (Alonso-Almeida, Llach, & Marimon, 2014).

Some of the organizational leaders produce sustainability reports to demonstrate their accountability to their stakeholders (Junior et al., 2014). Sustainability or

environmental reporting and the implementation of environmental policies are some of the tangible evidence of environmental commitment by organizational leaders to its stakeholders (Paille, Boiral, & Chen, 2013). These reports may thus act as a vital transparent communication tool between organizational leaders and their stakeholders regarding organizational, environmental, and social performance (Junior, Best, & Cotter, 2014). The increasing concerns and criticisms from environmentalists regarding environmental problems in the 1990s contributed to the rise in the disclosure of environmental and social reports (Alonso-Almeida et al., 2014).

The organizations in the pollution intensive industries have a high probability of engaging in self-regulatory codes such as the global reporting initiative due to increased stakeholder pressure and the need to protect the reputation of the organization (Perez-Batres et al., 2012). Most of the corporate leaders in the developed countries also produce sustainability reports to meet the expectations of the stakeholders who are progressively more aware and concerned about environmental and social problems attributed to organizational operations (Junior et al., 2014). The stakeholders seem to influence organizational activities.

The organizational leaders communicate their sustainability practices to their stakeholders through organizational websites, advertising, and the packaging of their products to foster customer loyalty, benefit from sustainability incentives that include tax incentives, and improve the relationships with the other stakeholders (James, 2013). There is thus transparency of organizational activities to meet the expectations of the stakeholders. Transparency involves a dependable and timely release of organizational

information to the public to augment accountability, ameliorate governance and strengthen stakeholder relationships (Bleischwitz, 2014). The stakeholders could learn more about organizational practices from the released information and hence take any necessary actions to protect their interests.

The African Minerals Development Center, the African Tax Administration, and the African Legal Support Facility are some of the emerging regional organizations in Africa to reinforce the governance of natural resources through improved transparency (Bleischwitz, 2014). These efforts to improve transparency in Africa could influence organizational leaders in developing sustainability reports and taking measures that could curtail environmental problems. Environmental management could be one of the measures of addressing environmental issues.

**Environmental management.** Environmental degradation resulting from mining and industrial activities is a major societal concern and hence the need for environmental management that might mitigate the impacts on the natural environment (Mkandawire & Oakes, 2015; Murillo-Luna, Garcés-Ayerbe, & Rivera-Torres, 2011). The developing countries could obtain much wealth from mining and oil extraction if there is proper management that could stimulate the growth of manufacturing and service industries that would, in turn, improve the living standard of the poor people (Hilson, 2012). Effective environmental management should involve actions aimed at resolving environmental problems.

Some of the environmental management practices include decreasing carbon emissions, proper management of waste, the efficient use of water and energy, and other

pollution control measures (Nyirenda & Ngwakwe, 2014). Environmental management practices also reflect the organization's commitment to the set practices of dealing with environmental issues (Gonzalez-Benito, Lannelongue, & Quieruga, 2011). However, there are significant challenges in managing the environment in some countries that are evident in their low environmental performance. Environmental performance categories include the effect of water on human health, biodiversity and habitat, forestry, fisheries, climate change and energy (Hsu, Lloyd, & Emerson, 2013).

Overall, the countries in Sub-Saharan Africa, North Africa, and the Middle East have the poorest environmental performance while those in Europe perform better due to issues relating to income, institutional factors, social development and other aspects (Hsu et al., 2013). Some organizational leaders engage in practices that indicate their readiness to alleviate environmental problems and address the concerns of their stakeholders. For instance, in enhancing stakeholder relationships and protecting the organizational reputation, some corporate leaders seek certification of the International Organization for Standardization (ISO) 14001 that encourages compliance with legal standards and adoption of environmental responsibility practices (Berliner & Prakash, 2013; Curkovic & Sroufe, 2011).

ISO 14001 standard is an important reference model in environment management since its establishment in 1996 that recommends a variety of directives that facilitate the development of environmental plans, policies, activities, and ways of control adapted to an organization (Boiral & Henri, 2012). Having a comprehensive documentation and implementation of environmental management systems is useful in qualifying for ISO

14001 certification that also involves frequent inspection of the organizations to assess whether they meet the stipulated standards (Berliner & Prakash, 2013). Maintaining or improving organizational performance relating to the environment is thus essential. Organizations that are certified could influence the practices of their suppliers.

**Environmental policies.** Environmental policy programs encompass the organizational leaders' intentions of addressing issues relating to the environment such as water, air, and noise pollution, deforestation, biodiversity conservation, carbon intensity, waste products and other pollutants (Shamaileh, 2016). The government is responsible for regulating and monitoring organizational activities, implementing safeguards against pollution and its related effects on the air, water, and the soil, including the negative impacts on human health and biodiversity (Kerr, 2015). Environmental regulations relate to all types of techniques that public authorities such as environmental agencies implement to control pollution emissions and enforce other standards (Féres & Reynaud, 2012). Environmental policies are seemingly important in protecting the environment.

The penalties associated with the violation of environmental regulations might influence organizational operations. Some organizational leaders develop environmental and social responsibility strategies to avoid severe penalties and create a positive image (Quisenberry, 2012). The effects on the environment might be severe for those practices that involve little compliance with the environmental standards and regulations. The organizational leaders' inaction in addressing environmental pollution could affect public health and cause mistrust by the public, leading to a poor corporate image (Voss, 2014).

The national governments can thus help by establishing and enforcing standards for protecting the environment and promoting public health.

Given the numerous environmental problems that have confronted people globally, the need for stringent regulations and full compliance with environmental regulations cannot be overstressed. However, the implementation of environmental policies is challenging, particularly in the developing countries where in spite of the deteriorating environmental quality, polluting organizational leaders and employees are not compliant with environmental laws and regulations (Shamaileh, 2016; Younis, 2015). This perspective is consistent with Konisky and Reenock's (2013) standpoint that the degree of noncompliance with environmental regulations, standards, and laws has continued to increase while the obsolete and fragmented environmental laws have exacerbated noncompliance in most developing countries.

## Literature Review

### Mining Organizational Practices

Mining operations involve the extraction of minerals from the earth. There is rising pressure on the natural resources in developing countries due to an increase in global demand for mineral resources (Maconachie & Hilson, 2013). Civil society organizations, such as nongovernmental organizations, trade unions, grassroots movements, academia, and churches expect mining organizational leaders to consider both the organizational economic benefits and the interests of the community and the environment (Yakovleva & Vazquez-Brust, 2012).

However, the mining projects involve large-scale operations in which numerous resources are extracted and processed, resulting in a high generation of waste, extensive pollution, and consumption of large quantities of water that trigger environmental and social problems for the local communities (Celebi & Özdemir, 2014; O'Faircheallaigh, 2015). Moreover, the mining activities and their associated processing techniques may worsen environmental problems. The organizational leaders and employees in most developing countries use technologies and approaches that do not support the environment or help in reducing inequalities within society (Jones, 2011).

Some corporate leaders are aware of the environmental issues but lack the expertise to make a positive impact as indicated in a survey. Global surveys of corporate leaders revealed that the leaders acknowledge the existence of environmental problems but are uncertain about how to address the challenges of environmental sustainability (Elliot, 2013). The organizational leaders could respond positively to environmental problems by complying with the laws and assuming responsibilities at the local and national level, thereby satisfying the needs of multiple stakeholders (Vintro, Sanmiquel, & Freijo, 2014). Compliance with environmental laws could be a positive step in reducing the environmental impacts of organizational activities.

Furthermore, radical changes in implementing environmental policies, use of environmentally friendly technologies, shared responsibilities, and the promotion of employee health and safety could lessen the problems caused by mining operations (Celebi & Özdemir, 2014; Dubois & Dubois, 2012; Kinzig et al., 2013; Kouikoglou & Phillis, 2011). Similarly, the adoption of a more integrative and holistic approach that

involves considering the environmental, economic, and social aspects in mining development during strategy formulation is advisable since mining activity is perceived to have severe environmental consequences (Everingham, 2012; Martin et al., 2014). Environmental and social impacts of mining operations could thus be minimized.

Any prospective mining operation should also be in compliance with the accepted principles of sustainable development by integrating environmental, social, and economic factors into the planning and implementation of mining projects to ensure that the exploitation of mineral resources serves the present and future generations (Kabai, 2013; Mkandawire & Oakes, 2015). Consequently, environmental impact assessment of mining is a vital process in evaluating the effects of the mining projects to make informed decisions (Appiah & Osman, 2014). Mining activities could involve reducing environmental impacts through improved strategy formulation, implementation, and evaluation.

Additionally, environmental sustainability initiatives should involve transformational strategies centered on eliminating waste and preventing poisonous chemicals from being formed and deposited in the natural environment (Parkes & Borland, 2012). Organizational leaders should strive to minimize environmental impacts resulting from their operations as they have a legal and ethical obligation to preserve the environment, protect human rights, and promote the health and safety of employees and the surrounding communities (Harvey & Bice, 2014; Ololade & Annegarn, 2013). The adoption of corporate social responsibility practices is seemingly essential to meet organizational needs and those of society.

The organizational leaders that view themselves as having legal and ethical obligations are committed to environmental sustainability that is rooted in the values and principles of the organization's mission statements and organizational codes of ethics (Sekerka & Stimel, 2012). Furthermore, organizational leaders that invest in environmental sustainability do so based on the belief that such practices contribute to the well-being of society, the environment, and economic benefits for the organization (Dilchert & Ones, 2012). Mining organizational leaders should take full responsibility for the environmental impacts of their mining operations even if there are no economic benefits, community expectations or legal obligations (Yakovleva & Vazquez-Brust, 2012).

The organizational leaders must take ownership of the environmental and social problems emanating from organizational processes, prevent adverse effects, and take corrective measures to protect the environment and the people in society by reinforcing ecological and social responsibility practices (Muthuri & Gilbert, 2011; Petrova & Marinova, 2013; Uecker-Mercado & Walker, 2012). The organizational leaders could organize activities in a way that reduces environmental and social impacts while ensuring the economic viability of the organization. Other authors proposed that employers should provide organizational leaders with the necessary tools and resources to motivate and reward employees in their quest to promote organizational citizenship behavior aimed at preventing environmental issues (Paille et al., 2013).

Corporate leadership support is thus a significant aspect to consider. Top management commitment, managerial support, and employee engagement and

commitment are some of the most important facilitators of pro-environmental initiatives for environmental sustainability (Dilchert & Ones, 2012; Harris & Tregidga, 2012; Lo, Peters, & Kok, 2012). It is thus imperative to have more organizational leaders that can positively influence organizational culture and climate by communicating the organization's core values to all its major stakeholders that focus on environmental sustainability (Quisenberry, 2012; Sekerka & Stimel, 2012).

The extent to which the employees perceive their organizations as supporting environmental protection influences pro-environmental behaviors and motivates employees to engage in environmentally sustainable behavior (Temminck, Mearns, & Fruhen, 2013). Consequently, organizational leaders should motivate employees and empower them to be proactive and innovative concerning environmental sustainability initiatives (Lamm, Tosti-Kharas, & Williams, 2013). The adoption of better technologies that promotes environmental sustainability could be beneficial to the people in society.

Environmental innovations that respond to environmental problems create new products and services in a way that protects the natural environment by minimizing pollution, waste, and other negative impacts (Forsman, 2013). However, environmental innovation should also generate value for the customers, and create competitiveness and profits for the innovators (Forsman, 2013). Environmental governance that involves developing environmental policies, communicating organizational objectives and activities while addressing environmental concerns of multiple stakeholders is essential to strengthen stakeholder relationships (Tang, Lai, & Cheng, 2012).

The persistent pressure by the stakeholders for organizational leaders to be socially and environmentally responsible has caused most organizational leaders in developed countries to engage in sustainability initiatives and practices within their organizations (Temminck et al., 2013). In facilitating environmental sustainability, organizational leaders should be flexible, support continuous learning, enhance pro-environmental culture, and embrace feedback from employees, customers, and the community while ensuring organizational competitiveness (Papagiannakis, Voudouris, & Lioukas, 2014; Quisenberry, 2012). Effective organizational and stakeholder management could foster the attainment of the desired goals.

Communication with the stakeholders is essential for the organizational leaders to understand the expectations of the stakeholders (Tang et al., 2012). Evidence from the United States and Japan suggest that increased stakeholder awareness of environmental problems and heightened interest in environmental sustainability has caused most organizational leaders to focus on sustainability skills in the individuals that they intend to hire (Heuer, 2012). The efforts in advancing environmental sustainability could prevent environmental problems and its related impacts.

**The Impacts of Mining Activities on the Environment and the Local Communities**

Mining operations may provide some benefits as well as some adverse effects on the environment and the local communities. The mining industry in most African countries has helped in creating employment and assisted the government in the construction of hospitals, schools and other infrastructure (Nzimande & Chauke, 2012). However, mining activities also present environmental and social challenges for the

people residing in the vicinity of the mines. While the communities initially welcome mining organizations during exploration, social tensions tend to rise after the commissioning of the mining projects due to the severe environmental consequences that are often not addressed (Lawson & Bentil, 2014).

The indigenous communities are significantly affected by the extraction of minerals and the relationships between the people in the extractive industries and those in society are usually characterized by conflicts and unfulfilled anticipations in most of the developing countries (Schueler, Kuemmmerle, & Schroder, 2011; Van Alstine & Afionis, 2013). The local people in the mining areas may not be satisfied with the mining operations when their needs are not met. There are a number of studies that indicate the prevalence of environmental issues resulting from mining processes.

Littlewood (2015) conducted a multiple case study involving four mining organizations in Namibia using semi-structured interviews with different stakeholder groups as the primary source of data collection. The respondents included representatives from the government, nongovernmental organizations, employees, and the local communities. The common themes were that environmental problems arising from mining activities were pollution and health problems (Littlewood, 2015). Future inquiry might include exploring stakeholder influence in mining operations to address the identified problems.

In another study, the findings from a mixed method research approach indicated that environmental and social costs associated with mining in South Africa were high (Ololade & Annegarn, 2013). The research participants reported poor health, decreased

water and air quality, higher unemployment rate, and low literacy levels (Ololade & Annegarn, 2013). In a related case, the research findings from Blight's (2012) study in South Africa revealed that water and wind erosion from fine-grained tailings and other mining waste products cause health problems, physical discomfort, and crop damage. There is thus evidence of environmental problems caused by mining activities.

Environmental problems related to mining operations also occurred in Zimbabwe and Ghana. Bhatasara (2013) purposively sampled 15 people from Mutoko communities in Zimbabwe and the themes from the study were that mining expansion had caused problems and pressures on the environment, livelihoods, the local community, cultural dynamics and social relationships in this community. Bhatasara focused on land acquisitions and mining operations and hence the need to explore stakeholder involvement in addressing environmental problems attributed to mining activities in African developing countries.

In Ghana, the establishment of the mines caused health problems, deforestation, a great decrease in agricultural activities, more poverty, and social conflicts as the mine developers took some of the best lands from the local people (Lawson & Benti, 2014; Schueler et al., 2011). The mismanagement of hazardous wastes from most of the mines in Africa also cause acid drainage and poisonous chemicals to leach into the surrounding communities that affects the people's health and the environment (Blight, 2012; McCormack & Schuz, 2012). Furthermore, mining processes lead to land degradation, ground and surface water pollution, air pollution, loss of wildlife and vegetation, health

problems, and land use conflicts in most developing African countries (Celebi & Özdemir, 2014; Jordan & Abdaal, 2013; Yakovleva & Vazquez-Brust, 2012).

There are negative impacts on the people and the environment due to mining activities. Drawing from the evidence in Canada, Mkandawire and Oakes (2015) ascertained that mining activities have caused social and economic problems for the local communities, including tailings, extensive areas of waste rock, and contaminated water that could be more devastating for the future generations. Latin America also has environmental and social problems attributed to organizational processes. Laborde et al. (2015) indicated that environmental pollution is widespread in Latin America and the toxic chemicals such as mercury, lead, arsenic, asbestos, pesticides, and hazardous wastes are the main causes of diseases and disability among children.

In China, mining and smelting activities are reportedly the largest sources of pollution from the heavy metals that affect human health, water, soils, vegetables and other crops (Zhang et al., 2012). The extraction of some minerals can cause lung cancer while excessive intake of lead from the polluted crops and the water can damage the nervous, skeletal, circulatory, enzymatic, endocrine and immune systems (Feleafel & Mirdad, 2013; McCormack & Schuz, 2012; Zhang et al., 2012). The other health issues linked to the high concentration of metals in the environment include kidney problems, skin rashes, stomach ulcers, respiratory problems, and weakened immune systems (Olowoyo, Odiwe, Mkolo, & Macheka, 2013). Mining processes emit pollutants that seem to cause major problems for people in most of the mining areas.

The magnitude of environmental degradation resulting from mining organizational practices makes it necessary to develop and implement the required measures of protecting the environment and the people. Partnerships between the people in the mining corporations and other organizations, civil society actors, the local communities and other stakeholders could alleviate environmental and social problems and hence facilitate environmental sustainability (Kolk & Lenfant, 2012; Littlewood, 2015). It is thus imperative to explore how different stakeholder groups could influence the implementation of environmental policies in the mining industry to promote environmental sustainability.

**The Role of the Government in Promoting Environmental Sustainability**

The government is one of the stakeholder groups that may influence organizational practices. Within the broader context of environmental sustainability, the government has a critical role in developing frameworks and standards for managing different aspects of the environment (Kock, Santaló, & Diestre, 2012). The government should be actively involved in creating a more enabling regulatory environment and a shared understanding of the roles and responsibility of the government and other stakeholders to promote environmental sustainability (World Bank, 2011).

The entrustment of the responsibilities and rights of the government could enable it to not only consider its interests but those of other groups in their relationships with organizational leaders and employees (Manetti & Toccafondi, 2014). It is the responsibility of the government to protect human rights and the environment of its citizens by redistributing wealth generated by the extractive industries (Pesmatzoglou et

al., 2014). Kabai (2013) also affirmed that the government as the custodian of the nation's minerals must ensure sustainable development in the exploitation and extraction of resources by having organizational leaders and employees work within a national and environmental policy framework, as well as within the norms and standards while promoting the social and economic benefits.

The developing countries are evidently unequipped in addressing environmental issues. There is more consideration of environmental risks and better enforcement of environmental policies in the developed countries than the developing world (Celebi & Özdemir, 2014). The weak enforcement of the environmental policies in the developing countries has contributed to more organizational processes that affect the environment. Hassaballa (2014) determined that the lax environmental laws in the developing countries attract polluting foreign investors that avoid stringent environmental standards in their home countries, hence increasing the likelihood of undermining the welfare of the people through increased pollution and resource depletion.

Tan-Mullins and Mohan (2013) evaluated the effectiveness of mitigating environmental impacts in Africa and concluded that there was urgent need to develop legislative and institutional frameworks to deal with issues relating to the extraction of natural resources, the environment, and transparency. McCormack and Schuz (2012) also alluded to the inadequate monitoring and implementation of the safety standards in the African mines as well as the use of certain technologies that are outdated and banned in the developed countries thereby aggravating the environmental problems. In Ghana, for instance, mining organizational leaders and employees do not comply with the

environmental laws and regulations enacted due to weak enforcement and the lack of commitment by the Environmental Protection Agency (Appiah & Osman, 2014).

The governments in Ghana and Angola are lax in enforcing the laws, and there is a lack of demand for environmental protection and transparency by the civil society (Tan-Mullins & Mohan, 2013). In most developing countries, there is also poor treatment and disposal of the effluents from the industries due to the inadequate legislation, the weak enforcement of the laws, and the inferior technologies (Acheampong, Paksirajan, & Lens 2013; Esau & Malone, 2013). The authorities in the developing countries also encounter solid waste management challenges due to the increased generation of waste and the associated high expenses of waste management (Guerrero, Maas, & Hogland, 2013).

Furthermore, the weak governance, the poor enforcement of the environmental legislation, and corruption in the developing countries have contributed to the lack of accountability of the environmental and social problems caused by the mining activities (Campbell, 2012; Edwards et al., 2014; Hilson, 2012). Consequently, the weak frameworks contribute to environmental degradation and results in high levels of exposures of the people to the toxins in drinking water, air, soil and the food chain (McCormack & Schuz, 2012). Environmental policy implementation is thus a major challenge for most developing countries.

Some studies conducted in Africa revealed that a significant number of the environmental problems stem from poor policy development and enforcement by the government and the regulatory agencies. In South Africa, Diale (2014) discovered low levels of compliance by the leaders and employees in the mining corporations. Diale also

found that there was lack of enforcement by the government, and that the low penalties for noncompliance did not encourage socially responsible behavior by the mining organizational leaders and employees.

Similarly, Muthuri and Gilbert (2011) found little support and involvement from the government in dealing with environmental and social issues in Kenya. Acheampong et al. (2013) also conducted a study in Ghana to examine the physical and chemical effluents of a gold mining organization. The researchers reported that there were high amounts of suspended solids, arsenic, copper, and cyanide, whose concentrations exceeded the Ghana Environmental Protection Agency discharge limits.

Likewise, Akiwumi (2014) reported that the failure of the government to formulate and implement mining policy in Sierra Leone resulted in repeated conflicts between the organizational leaders and the local communities. Akiwumi also established that there were increased demands by the community for mineral wealth benefits and community development. Since mining activities have adverse effects on the environment and society, the government should make more efforts to ensure the development of enforcement mechanisms and severe penalties while the organizational leaders should promote continuous environmental, social and economic development (Diale, 2014).

There are calls for improved practices by the government and organizational leaders aimed at fostering environmental sustainability. The governments of the developing countries could integrate the environment into the overarching policy and the local government policies as most decisions and activities require more than a distinct

environmental agency to ensure that the policies and plans across the different sectors include environmental considerations (Nunan, Campbell, & Foster, 2012). The government could thus take the necessary measures to protect the health and welfare of the people, including remedying environmental degradation and preventing environmental pollution.

Mwitwa et al. (2012) proposed the development of the governance instruments to deal with the environmental and social problems through the financing of environmental monitoring and improving collaboration with the stakeholders. Information sharing, self-evaluation, self-correction, and increased stakeholder participation could also be effective ways of addressing environmental issues (Saengsupavanich, Gallardo, Sajor, & Murray, 2012; Smith, 2012). The other suggested strategies for controlling the environmental hazards include creating platforms for dialogue with the different relevant stakeholders, developing a network of collaborating centers, and supporting the development of evidence-based prevention policies (Laborde et al., 2015).

There could also be structural changes that would permit the policy makers to develop policies that might stimulate lasting changes in the beliefs and norms of the people in dealing with the environmental issues, and to more effectively evaluate the long-term implications of the policy proposals (Kinzig et al., 2013). Stakeholder involvement, mobilizing the organization's core competencies, attaining credibility through total transparency, and maintaining the proper roles and responsibilities of the organizational leaders, the government, and the communities could also be a means of

addressing environmental problems (Harvey & Bice, 2014). Cooperation and coordination among the different stakeholder groups is thus imperative.

Collaborative efforts among the local governments, the regulators, the employees, and the local communities to reform policy and promote environmental sustainability are necessary (Bhatasara, 2013; Parkes & Borland, 2012; Pesmatzoglou et al., 2014). The different stakeholder groups could influence organizational activities and have significant roles in developing and implementing measures that could alleviate environmental issues. The government's assistance in mandating the development of a legal requirement for formal negotiations between the mining organizational leaders and the community representatives before undertaking the mining projects could help in protecting the interests of the local communities (O'Faircheallaigh, 2015).

The additional measures include developing and implementing strict environmental laws, adopting new production techniques, and ensuring transparency of organizational activities (Hassaballa, 2014). It is also imperative for the government to create awareness to the communities regarding their rights and capability of becoming an essential change agent concerning the responsibility of the organizational leaders operating within their environment (Amran et al., 2013). There are thus many recommendations relating to how stakeholders could influence mining organizational practices.

The government could help in protecting the interests of the people that reside around the mines. The communities within which the mining organizations operate are one of the stakeholder groups that are usually ignored thereby making it necessary for the

government to create an awareness of environmental problems through educational processes (Amran, Zain, Sulaiman, Sarker, & Ooi, 2013). The government sensitization of the local communities regarding environmental issues could transform the citizenry into a powerful coalition of stakeholders who might exert pressure on organizational leaders to be socially and environmentally responsible (Guoyou, Saixing, Chiming, Haitao, & Hailiang, 2013). The government could have a significant role in promoting environmental sustainability.

Community engagement and participation by the other stakeholders to promote the welfare of society and the environment is also necessary (Dobele et al., 2014; Crow & Baysha, 2013). According to McIntyre, Woodley, Danoucaras, and Coles (2015), public health professionals should inform the people in the communities about the health risks associated with mining pollution and help them understand their rights. Nyirenda and Ngwakwe (2014) proposed designing and incorporating the environmental management practices and sustainable development in the curriculum of the institutions of higher learning through government assistance and support from the scholars and the other stakeholders.

In Liberia, for example, there are calls for the government to be actively involved in tackling environmental issues by educating organizational leaders and the community on the need to deal with environmental problems, and allocating resources to enforce environmental standards (Younis, 2015). In most countries, government pressure on mining organizations is reinforced through policy development and implementation although collaboration between organizational leaders and governments is required to

attain long-term environmental sustainability (Ehrgott, Reimann, Kaufmann, & Carter, 2013; Esau & Malone, 2013). The government might help in working to develop and enforce environmental policies.

**Stakeholder Influence and Mining Organizational Practices**

As earlier indicated, some people are more aware of environmental problems and the need to alleviate them. Organizational leaders around the world are thus experiencing increasing pressure from people in society to change their strategies to promote environmental sustainability (Baur & Schmitz, 2012; Roxas & Coetzer, 2012). Stakeholders are essential in influencing the behaviors of organizational leaders and employees although the stakeholders' perspectives on corporate response to a variety of social, environmental, and economic issues vary (Delgado-Ceballos et al., 2012). The stakeholders might influence the adoption of measures that may lessen environmental issues.

There are differences in organizational practices between the developed and developing countries. In most developed countries, the pressure from the mining organizations' stakeholders, coupled with the fear by organizational leaders to lose their operating licenses has prompted them to incorporate the views of the stakeholders in their strategic decision-making processes (Martin et al., 2014). Government agencies, nongovernmental organizations, and well-informed customers have caused some organizational leaders to adopt sustainable organizational practices and not only to focus on obtaining financial benefits for the shareholders (Quisenberry, 2012; Wolf, 2013).

Arimura, Darnall, and Katayama (2011) collected data from 1499 Japanese manufacturing facility managers in charge of environmental activities. The aim of the study was to investigate the effects of ISO 14001 certification on the advancement of environmental practices relating to green supply chain management. The research findings were that the manufacturing facilities with ISO 14001 were 40% more probable to evaluate the environmental performance of their suppliers and 50% more likely to compel their suppliers to adopt particular environmental practices than those without ISO 14001 certification.

Arimura et al. (2011) further inferred that the ISO 14001 certified Japanese manufacturing facilities had a significant role in lessening environmental effects outside their operations. The researchers recommended the creation of government programs to foster the development of voluntary environmental management systems to promote environmental responsibility. Government involvement through the development of effective environmental policies might influence organizational practices that contribute to environmental sustainability.

Some organizational leaders produce sustainability reports to address the concerns of their stakeholders. Fernandez-Feijoo et al. (2014) collected data from a sample of 1047 organizations in different industries from the United States of America, Denmark, Germany, Spain, Finland, Norway, Portugal, Sweden, Brazil, and Japan to determine whether stakeholders influence transparency of sustainability reports. These authors established that pressure from the customers, the government, and employees foster transparency of sustainability reports within the global reporting initiative framework.

In addition, Fernandez-Feijoo et al. (2014) reported that the organizations in environmentally sensitive industries exhibited higher levels of transparency in their sustainability reports. The sustainability reports provide information that could help stakeholders in judging organizational activities aimed at protecting the environment and the people in society. In a similar study, the research results from a sample of 1,145 large American public organizations revealed that organizational leaders do not respond in the same way to the different stakeholders' pressure (Perez-Batres, Doh, Miller, & Pisani, 2012).

However, some organizational leaders do not produce sustainability reports as earlier indicated. Stubbs et al. (2013) interviewed one representative from 23 Australian organizations in different industries, with the mining industry accounting for 10 participants while the rest were from transport, gaming, consumer staples, energy, financial services, and other industries. The purpose of the study was to determine the lack of sustainability reports from their organizations. The research participants indicated that they were aware of sustainability reports as well as the environmental and social impacts of their organizational processes, but they do not generate sustainability reports due to the absence of stakeholder pressure and lack of perceived benefits (Stubbs et al., 2013).

Environmental, social, and economic problems resulting from mining activities must require the active involvement of the government, the local communities, environmental agencies and other stakeholders to promote long-term sustainability and ensure the distribution of economic gains (Everingham, 2012; Mkandawire & Oakes,

2015; Petrova & Marinova, 2013). The relevant stakeholders in the community should cooperate with organizational leaders in developing social impact management plans that address the effects of mining on community health, safety and the provision of education, and other social issues (Everingham, 2012). Collaboration among the different stakeholder groups and organizational leaders could yield positive outcomes.

The stakeholders could also form local, regional, national, and international action groups to influence the activities and decision-making of the polluting organizations as the established alliances and allegiances have a greater impact and resources to monitor organizational compliance with environmental laws and other regulations (Voss, 2014). The alliances could influence organizational activities to focus on environmental sustainability aspects in the production process. Environmental nongovernmental organizations are the most prominent civil society group that exerts enormous pressure for corporate leaders and employees to become more environmentally responsible (Joensuu et al., 2014).

The significance of the environmental nongovernmental organizations in influencing organizational practices is apparent in a study conducted in Bangladesh. Hoque, Clarke, and Huang (2016) employed a five-point Likert survey technique to investigate environmental awareness, the effect on pollution control, and stakeholder influence strategies among 11 civil society groups in Bangladesh. The civil society groups were environmental nongovernmental organizations, trade unions, scientists and researchers, political parties, professionals, media, artists and players, literacy and

cultural organizations, women and children organizations, bureaucrats, and professional associations (Hoque et al., 2016).

The researchers established that only the environmental nongovernmental organizations were raising awareness of environmental problems out of the 11 groups. There was no direct influence by all the 11 groups on the organizations or the federal government regarding the prevention of pollution (Hoque et al., 2016). A future inquiry might include a qualitative case study to obtain more information concerning the lack of stakeholder involvement as the researchers did not provide detailed explanations from the quantitative study.

Despite the limited participation of the media in Bangladesh, other authors have referred to the vital role of the media in raising awareness on environmental issues. The media coverage on environmental issues has a significant role in raising public awareness on organizational practices concerning environmental and social sustainability practices, particularly by publicizing information on the dangerous effects of industrial pollution (Athichitskul, 2011; Hahn & Lülfs, 2013). A case in point is the media in South Africa that provided more understanding of environmental problems.

The South African media's increased publicity on the severe impacts of mining activities influenced the public in being more cognizant of environmental problems that led to an increase in the number of environmental groups in South Africa to help address environmental issues (Nzimande & Chauke, 2012). Since the media helps in disseminating information to the public, good relations with the media could lead to a positive image for an organization through positive publicity (Athichitskul, 2011). The

need to develop a positive organizational image or reputation could also cause some organizational leaders to meet the environmental sustainability demands of some stakeholders.

Esau and Malone (2013) posited that some stakeholder groups could influence corporate environmental behavior by requiring environmental and social responsibility practices from the people working in the mining organizations. Nongovernmental organizations, customers, and other stakeholders could alter organizational practices of the polluting organizations through boycotting their products, negative media coverage, and community pressure (Féres & Reynaud, 2012). Stakeholders could thus influence organizational activities.

Garcés-Ayerbe et al. (2012) examined the relationship between stakeholder pressure perception of the managers associated with environmental issues and the degree of proactivity of the organizations' environmental strategies. Garcés-Ayerbe et al. collected data from a sample of 240 managers working in different organizations in Spain. The research outcome was that the greater the stakeholder pressure that the managers perceived, the most proactive managers became in developing environmental strategies.

Tang et al. (2012) synthesized secondary data to analyze 500 largest organizations from 15 industries in the United States of America. Tang et al. established that environmental governance promotes corporate reputation, customer satisfaction, and subsequently organizational economic performance. Since the above studies occurred in

the developed countries, a qualitative case study in an African setting may highlight stakeholder influence from this perspective.

In certain cases, organizational leaders and employees cooperate with the people working in environmental organizations to resolve critical environmental and social problems. Kim and Nam (2012) reviewed the websites of 2008 Fortune Global 500 corporations to determine their relationships with environmental organizations and reported that the organizational members in Asia have fewer relations with the other members of the environmental organizations in comparison to those in Western Europe and North America. One of the limitations of the study is that Kim and Nam evaluated company websites to observe their relationships with environmental organizations that may not provide comprehensive information about the relationships.

Other authors have validated Kim and Nam's assertion regarding the involvement of most developed countries in environmental issues. There is a general recognition that stakeholder awareness and concerns over environmental problems significantly influences organizational performance concerning environmental aspects in most developed countries (Baur & Schmitz, 2012; Gonzalez-Benito et al., 2011). Stakeholder influence is thus important in promoting environmental sustainability in some developed countries.

**Environmental Sustainability Challenges in Zambia**

Zambia is one of the African developing countries with environmental sustainability challenges. There is a rapid growth of mining activities in most developing countries with its related negative impacts on the environment while the national capacity

to ensure sustainability of water management and other resources remains underdeveloped (Lindahl, 2014; McIntyre et al., 2015). Chifungula (2014) conducted a general audit of the management of environmental degradation caused by mining operations in Zambia and deduced a lack of compliance with the environmental licensing requirements and the environmental laws and regulations stipulated by the government.

The audit also uncovered the ineffectiveness of government measures in tackling environmental degradation caused by the mining activities in Zambia (Chifungula, 2014). The poor implementation of the legislation is due in part to the inadequate manpower and technical support, and the lack of coordination between the institutions that are responsible for the enforcement of the rules and regulations (Lindahl, 2014). Execution of the laws and regulations is thus a great challenge. According to the 2014 Environmental Performance Index (EPI), Zambia's score of 41.72 out of 100 points is indicative of poor environmental performance and a deteriorating environment that could jeopardize human health (Hsu et al., 2014). Mining activities have contributed to environmental degradation.

There is an alarming deforestation rate in the Copperbelt Province of Zambia that is partially attributed to mining development activities and hence the need for stakeholder partnerships, knowledge sharing, and empowerment of the local communities to protect the environment (Stringer et al., 2012). Research conducted in Zambia unveiled the prevalence of environmental issues. For instance, Mwitwa et al. (2012) used satellite imageries in a study and reported extensive deforestation over time around 12 mining

towns in the Copperbelt Province of Zambia and the Democratic Republic of Congo as a result of clearing vast areas for the development of mines.

Kalaba (2016) also verified the incidence of deforestation in Zambia and concluded that there is poor policy implementation to reduce deforestation due to the weak legal framework, limited institutional capacity, political influences, lack of funding, insecure land tenure, and the absence of coordination by the different sectors. The other environmental problems according to the findings by Mwitwa et al. (2012) include pollution, a decline in wildlife, death of fish and other aquatic life. There researchers also reported the noncompliance with the environmental regulations by the mining organizational leaders and employees as well as the lack of enforcement of the national rules. It is thus imperative to explore ways of addressing the identified environmental problems.

In another study, Mihaljevic et al. (2011) examined the composition of tree rings and collected soil samples from many locations in the vicinity of the mining smelter and places away from the smelter. Chemical analysis of the samples indicated that the soils from the contaminated profiles were more acidic and had higher total contents of sulfur, copper, cobalt, zinc and lead than the soil from the uncontaminated sites (Mihaljevic et al., 2011). The research findings also revealed that the copper and cobalt contents were also significantly elevated in the rings of trees directly affected by the mining smelter thereby signifying the prevalence of environmental degradation resulting from mining pollution (Mihaljevic et al., 2011). The research findings indicate that there are challenges in protecting the natural environment in Zambia.

The impacts of mining operations were also apparent in the other following research. Nachiyunde et al. (2013) collected and analyzed water samples from 74 sites such as farmlands, dump sites, major rivers, small streams, water from many public faucets and other water sources from the five provinces of Zambia. After analyzing the samples, Nachiyunde et al. reported a high incidence of water pollution that led them to infer that the environmental controlling agencies do not have effective control and remediation measures.

Similarly, Ndilila et al. (2014) corroborated the elevated concentrations of cobalt, copper, selenium, lead, zinc, and other metals in the air, drinking water, and the soil that could be a health hazard for the people residing in the mining towns. The research outcome validates the incidence of pollution around mining towns in Zambia and the weak enforcement of the environmental laws. The additional studies generated similar results associated with environmental pollution and degradation.

Kapungwe (2011) conducted a laboratory analysis of 30 wastewater samples collected from Mufulira and 45 wastewater samples from Kafue in Zambia. The research findings revealed heavy metal content in the wastewater used for irrigation in the farming areas that could jeopardize the lives of the people that depend on the produce from the farms in these particular areas (Kapungwe, 2011). The pollution of the wastewater was attributed to mining and other manufacturing activities around the farming area (Kapungwe, 2011). There is thus poor disposal of waste that has been problematic in most mining areas for some time.

In 2007, Zambia's Konkola Copper Mine caused extensive water pollution when its acidic waste entered the Kafue River that is the primary source of water for over two million people in the area (Lungu, 2009). Subsequently, thousands of the people who drank the contaminated water and consumed the poisoned fish became sick (Lungu, 2009). Therefore, Kapungwe's findings reaffirmed the predominance of environmental pollution in Zambia that is also a major health concern. Another example of environmental problems is the exposure of more than 300,000 individuals to high levels of lead discharge from a mine in Kabwe (Lungu, 2009). There are still concerns about pollution in Kabwe, and other authors have investigated the effects of pollution in the areas near the mine.

Yabe et al. (2013) examined 17 free-range chickens raised near a lead-zinc mine in Kabwe for metal contamination in different edible organs and generated results that showed high concentrations of lead and cadmium that were above the maximum limits for human consumption. The pollutants from the mining processes accumulate in the food chain that could cause health problems if people consume the affected products (Yabe et al., 2013). Mining activities thus create environmental, health and other social issues. The studies in Zambia centered on mining problems and their impacts and hence the need for further research that might help in lessening environmental problems.

## Gap in the Literature

The previous studies on environmental and social problems have not included stakeholder influence in promoting environmental sustainability in the mining industry in Zambia. Most research on corporate social responsibility that includes environmental

aspects involved evaluating the economic and financial benefits for organizations with less focus on the stakeholders or how organizational activities affect society (Moura-Leite & Padgett, 2011). In investigating the different levels of corporate social responsibility commitment in the tourism industry in Livingstone, Zambia, McLachlan and Binns (2013) determined that corporate social responsibility activities are underdeveloped and recommended future studies that center on the measures of addressing environmental and social problems.

The other recommendations for future research in the developing countries include explaining the factors that influence organizational leaders to respond to community needs, exploring the dynamics of stakeholder relationships and how they mediate corporate contribution to the welfare of society and the environment (Idemudia, 2014; Maconachie & Hilson, 2013). Environmental sustainability is related to corporate social responsibility and hence the need to explore stakeholder influence in the implementation of environmental policies in the mining industry in Zambia. Many studies that I reviewed in Zambia also involved determining environmental and social problems resulting from mining operations.

There was empirical evidence of excessive pollution, weak regulatory frameworks, inadequate government support, and poor implementation that signify limited stakeholder involvement to minimize environmental problems in Zambia (Edwards et al., 2014; Esau & Malone, 2013; Nachiyunde et al., 2013; Ndilila et al., 2014). Furthermore, most of the studies on stakeholder influence on organizational activities occurred in the developed countries while studies on stakeholder influence in

the developing countries that includes Zambia are limited. I could thus address the gap in the literature by generating information from an exploratory multiple case study that involves different stakeholder groups and their influence in promoting environmental sustainability in Zambia.

## Summary

In Chapter 2 of the literature review section, I highlighted the issues associated with stakeholder influence in promoting environmental sustainability in the mining industry. The search strategy and sources of information for the literature review were also part of this section. The conceptual framework presented focused on the relationship between an organization and the identified stakeholders as exemplified in Freeman's stakeholder theory. Stakeholder theory was the appropriate lens in discussing the various elements of organizational practices and the impacts on the environment and society. The conceptual framework included the significance of stakeholders, corporate social responsibility, environmental sustainability, sustainability reports, and environmental management.

The other elements presented in Chapter 2 are the mining practices and their impacts on society. There are increasing concerns regarding organizational activities that have resulted in growing pressure for organizational practices that preserve the environment for the benefit of the present and future generations. Chapter 2 also contained information on the different studies relating to stakeholders, organizational practices, and the environment.

Most studies in African developing countries, including Zambia centered on environmental problems and their related effects while some research in the developed countries included stakeholder influence relating to environmental issues. A review of past literature thus revealed a research gap associated with stakeholder influence in the extractive industries of developing countries. An exploratory multiple case study on stakeholder influence in the implementation of environmental policies to promote environmental sustainability in Zambia could yield information that might address the identified gap in the related literature. Chapter 3 is the next chapter that contains information on the research methodology that I will employ to obtain information aimed at filling the noted knowledge gap.

# Chapter 3: Research Method

In reviewing literature, I identified a research gap regarding stakeholder influence in the extractive industries of developing countries. Therefore, the purpose of this exploratory multiple case study was to gain an in-depth understanding of how stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability in Zambia. I also wanted to gain more insights of the stakeholders' involvement in promoting environmental sustainability.

Chapter 3 contains information on the research methodology that I used to answer the research question adequately and generate additional information to address the gap in the related literature. Other topics in Chapter 3 include the research method and rationale, research design and rationale, research question, role of the researcher; strategy for selection of research participants, and instrumentation. Chapter 3 also includes procedures for recruitment, participation, and data collection; the data analysis plan, a discussion of issues of trustworthiness; and ethical procedures. The final section of this chapter is a summary of the main points and a transition to Chapter 4.

## Research Question

The research question signifies the aspects of inquiry that the researcher wants to study and is useful in identifying what is of most interest to guide the researcher in collecting relevant data (Miles et al., 2014). The central research question for this qualitative exploratory multiple case study was: How do stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability in Zambia? The research question was helpful to me in

directing the study and collecting relevant data that could address the research problem and fill the gap in the related literature.

## Research Method and Rationale

The research approach for the study was the qualitative research method as it facilitated the acquisition of detailed information from research participants. Qualitative research is a discovery-oriented approach that is useful in exploring, capturing, and communicating an in-depth understanding of less known issues or phenomena based on the people's perceptions and experiences (Johnson & Bloch 2015; Stake, 2010). Qualitative researchers usually use interviews with open-ended questions as a means of collecting data that they record through field notes and tape recordings (Jacob & Furgerson, 2012; Tessier, 2012).

Open-ended questions are ideal for prompting exhaustive responses from research participants, allowing follow-up questions, and making clarifications to obtain comprehensive information (Jacob & Furgerson, 2012. A qualitative research approach also enables researchers to conduct an exploratory study in a natural setting where they can explore and capture individuals' experiences and meanings and develop themes from emerging data (Aluwihare-Samaranayake, 2012; Campbell, 2014). Moreover, qualitative research methods are applicable in understanding people's behaviors, attitudes, and perceptions within a social, cultural, economic, and another context (Hazzan & Nutov, 2014). A qualitative research approach was most fitting to address the research problem adequately for my study.

Conversely, a quantitative research method was inappropriate as it involves statistical analysis that was irrelevant to this study. Statistics and probability are some of the fundamental features of a quantitative research approach that involves examining relationships among variables (Goertz, & Mahoney, 2013). Researchers using this approach analyze numerical data and perform statistical tests and may thus miss contextual detail from a study (McCusker & Gunaydin, 2015). The quantitative approach is seemingly not suited for obtaining detailed information from the research participants.

Furthermore, researchers who use a quantitative approach use closed-ended questions, a preconstructed standardized instrument, systematic measurements, mathematical models, and statistics to analyze their data (Yilmaz, 2013). Asking closed-ended questions might inhibit the collection of detailed data from research participants and the ability to have an in-depth understanding of the influence of stakeholders. The manipulation and control of variables involved in quantitative research were also not required for this study (Mann, 2012).

Quantitative methods also include the use of rating scales and questionnaires, the investigation of correlations and cause and effect relationships among variables, the testing of hypotheses, and the conducting of experiments (Arghode, 2012; Bansal & Corley, 2012). These aspects were not necessary for me to have a robust understanding of stakeholder influence. I decided that that a qualitative approach would provide more detailed information from different stakeholder groups.

## Research Design and Rationale

I selected the qualitative multiple case study as the appropriate research design for this study. Case study research design is ideal for contemporary cases, exploratory studies, and obtaining a holistic and real-world perspective in studying organizational and managerial processes (Yin, 2014). It involves collecting data in a natural setting and exploring complex issues by using multiple data sources to have a deeper understanding of a phenomenon within its context (Iacono et al., 2011; Taylor, 2013). My data sources were organizational leaders and different stakeholder groups in a real-life contemporary setting.

A researcher might collect extensive data on individuals, events, or programs by administering interviews; making observations; and reviewing documents, past records, and audiovisual materials (Leedy & Ormrod, 2013). Analyzing multiple sources of data was essential in acquiring the required information for my study. I also reviewed public documents related to the study. The other data sources were semistructured interviews with individuals from the mining organization and stakeholder representatives from the Ministry of Mines, Energy, and Water Development, ZEMA, a nongovernmental organization, local media, and the local community.

I conducted one-on-one interviews with four organizational leaders in a mining company and four representatives from each stakeholder group to make up a total of 24 research participants. The use of a multiple case study design enabled me to obtain detailed information to gain more insights of stakeholder influence regarding environmental sustainability and the activities of the mining organization. Such a design

allows researchers to generate new knowledge of phenomena through a comprehensive analysis of a selected case or cases (Damianakis & Woodford, 2012). An in-depth analysis of cases was necessary to become more enlightened about stakeholder influence in the mining sector.

A multiple case study was ideal as my study involved exploring different cases or stakeholder groups. In considering other case study designs, the explanatory case study is suitable in explaining assumed links while the descriptive case study is suitable for describing a phenomenon or intervention, and the natural context in which it occurred (Yin, 2014). Explanatory and descriptive case studies were thus not applicable to the study as there were no known links or the need to describe the phenomenon. I used the multiple case study design as my study required obtaining data from different stakeholder groups.

Similarly, I viewed a phenomenological research design and grounded theory as unsuitable for the study. Researchers using a phenomenological design focus on providing a detailed understanding of a particular phenomenon based on the lived experiences of participants (Yuksel & Yildirim, 2015). In phenomenology, the researcher refrains from making presumptions, analyses, or explanations (Moustakas, 1994). Instead, he or she develops questions that focus on obtaining the descriptions and meanings that people ascribe to their experiences (Moustakas, 1994). The phenomenological research design was thus inappropriate for the study as it is centered on the lived experiences of the individuals while I intended to gain a holistic understanding of the involvement of different stakeholders using multiple data sources.

The grounded theory research design was also inapplicable since it entails theory generation from the collected data. Grounded theory is a systematic approach in which the researcher compares many concepts articulated by the research participants through constant comparative analysis to develop a theory (Glaser, & Strauss, 2009). The theory is constructed from the emerging concepts from the data that involves a continuous cycle of data collection and analysis where subsequent data collection is based on the concepts derived from the analysis (Corbin & Strauss, 2015). There is thus ongoing data collection and analysis in the grounded theory research design.

The process of data collection and analysis continues until the researcher attains data or theoretical saturation that is hard to attain if the participants have significant variations (Kolb, 2012). Therefore, grounded theory was inappropriate as the purpose of the study was not to construct a theory as it could be time-consuming and expensive. The qualitative multiple case study design was most fitting in exploring stakeholder influence in promoting environmental sustainability in the mining industry in Zambia.

## Role of the Researcher

My role as a researcher included being the primary instrument in collecting data from the researcher participants. The researcher is the main instrument for data collection at the research site through observations, conducting interviews, and examining documents under the qualitative research approach (Patton, 2002). I conducted face-to-face interviews with mining organizational leaders and the representatives from the different stakeholder groups to collect data relating to stakeholder influence in promoting environmental sustainability.

Data collection also included field notes and tape recordings that I transcribed based on the recommendations of Tessier (2012). There was also document review to obtain additional information that might help in answering the research question. Some of the significant aspects to consider in collecting data are showing respect, genuine interest, and concern for the interviewee (Jacob & Furgerson, 2012). I thus followed the above directives to communicate effectively with the participants and obtain the required information. It is also imperative for a researcher to respond to others, and develop personal and communication skills that include open listening and showing appreciation during the interview process (Collins & Cooper, 2014). Consequently, I focused on the interviewee and showed sustained interest during the interview.

The interview protocol (Appendix D) was a valuable tool in maintaining a similar approach in introducing myself to the research participants as well as conducting and concluding the interviews. The goal was to avoid variations throughout data collection process. Regarding the conflicts of interest, I had no personal or professional relationships with the research participants that might affect the outcome of the study. According to Xu and Storr (2012), a researcher may collect data as a participant or non-participant observer, and as an insider or outsider. I collected data as an outsider who has no working relationships with the respondents. My other responsibilities as a researcher included developing the interview questions for data collection as well as analyzing and interpreting the data.

I did not allow my perspectives or experiences to influence the study, and I reflected on my actions to identify and address my biases. The ethical stances for the

research included having a clear explanation of the purpose of the study and how the research findings will be published to the research participants. Damianakis and Woodford (2012) recommended that researchers should uphold ethical standards and principles while conducting research to protect the research participants. As a result, my other role as a researcher involved the provision of the informed consent forms to the research participants and the protection of their identity and rights.

I also obtained clearance from the Institutional Review Board before conducting the study. The other actions that I took were protecting the interests of the research participant by explaining in detail their freedom to stop or withdraw from the interview, and ask for clarifications or express other concerns. There was no compensation for being part of the study, and the participants were aware of this fact.

## Research Participant Selection Logic

The selection of the research participants for the study was contingent upon their position within a mining company and whether they were major stakeholders of the mining organization. The intention in the sampling procedure was to include organizational leaders and the stakeholders of a mining organization. I also followed the guidelines offered by different authors. For instance, Acharya et al. (2013) inferred that the sampling method depends on the population of interest, and should include careful planning to generate reliable results.

Moreover, qualitative sample sizes rely on the purpose and objectives of the study, and the principle of data saturation with the samples being typically smaller than those in quantitative research since qualitative methods usually involve gathering detailed

data to gain more understanding of a particular phenomenon (Dworkin, 2012; Mason, 2010). Though data saturation is an important aspect of qualitative research, some authors are of the mindset that it is not a determining factor in some qualitative studies. O'Reilly and Parker (2013) reported that not all qualitative studies depend on data saturation as an indicator for the sample size sufficiency or suitable criterion for determining quality.

Marshall, Cardon, Poddar, and Fontenot (2013) proposed 15 to 30 interviews for single case studies. The selection of adequate and appropriate research participants was essential for the research outcome to be credible. The study involved interviewing major stakeholders and organizational leaders from a mining company located in the Copperbelt Province of Zambia where there are major mining activities that contribute to air, soil and water pollution, geotechnical issues, land degradation and other environmental problems (Lindahl, 2014).

I purposively sampled the research participants to ensure the inclusion of the people that might provide information that could adequately address the research problem. The reasoning in purposeful sampling lies in choosing information-rich cases to study in a detailed way to gain valuable insight of a phenomenon **(**Patton 2002; Suriz, 2011). Consequently, I identified all the mining companies in the Copperbelt Province, emailed the organizational leaders explaining the purpose of the study, and invited them to participate in the study. The selection of the mining organization depended on the feedback regarding the willingness of organizational leaders to be part of the study.

There were also email invitations to the stakeholders in the Ministry of Mines, Energy, and Water Development, Zambia Environmental Management Agency, a

nongovernmental organization, the local media, and the local community. I interviewed a total of 24 individuals from the mining organization and stakeholder representatives to attain data saturation. The study also included reviewing public documents from the government and the environmental protection agency. The general audit by Chifungula (2014) revealed that the Zambia Environmental Management Agency did not effectively monitor and enforce environmental policies and hence the need to obtain information from this stakeholder group to learn more about its activities.

The Ministry of Mines, Energy, and Water Development is responsible for mineral resources management and regulates the development of the mining sector (Chifungula, 2014). Representatives from this stakeholder group could potentially offer more insights on their influence in promoting environmental sustainability in the mining industry. The other stakeholder groups that were part of the study were the local media, the local community, and a nongovernmental organization that is concerned about environmental issues.

## Instrumentation

Research involves the use of different instruments in collecting the required data to address the research problem. Qualitative researchers are the primary instruments for data collection and analysis (Xu & Storr, 2012). I thus collected and analyzed all the data for the study. The data collection phase also involved reviewing relevant public documents about environmental laws from the environmental protection agency and other pertinent public sources. A field notebook was useful in recording data and important observations.

The interview protocol that I developed (Appendix D) served as an instrument in collecting data. The semi-structured interviews with open-ended questions enabled me to acquire information from the research participants and ask follow-up questions when necessary. Jacob and Furgerson (2012) inferred that interviews with open-ended questions permit researchers to obtain detailed information that could help in describing and explaining phenomena. The procedure for commencing, conducting, and concluding interviews was the same for all the research participants with the aid of the interview protocol to attain consistency during data collection.

**Field Test**

I conducted a field test to evaluate the alignment of the research question to the interview questions and hence enhance the instrumentation for the study. Sue and Ritter (2012) recommended doing field tests to pinpoint any problems in the researcher's work before collecting data. The procedures for the field test involved sending invitational emails to qualitative research experts based on the information from Walden University's faculty directory. The invitational email for field test participation (Appendix B) also contained an attachment of the abridged proposal that included the problem statement, the purpose statement, the research question, and the interview questions.

The field test involved four willing participants that teach qualitative research methods and also serve on dissertation committees. The experts were kind enough to highlight some of the elements that I omitted and also offered additional advice. The first qualitative method expert asserted that the study should be a single case study as I intend to explore one mining company. I spoke to the expert and explained that the study would

also involve collecting data from multiple stakeholder groups, as well as analyzing data within each stakeholder group and collectively as a whole. Consequently, the study is a multiple case study.

The expert also suggested that I add interview questions relating to environmental problems. I took his advice and included a question on environmental issues in the revised interview protocol. The second expert recommended including the lack of strategy for exploiting natural resources and minimizing environmental degradation in the specific problem section of the proposal. I chose not to incorporate the above statement as the focus of the study is stakeholder involvement that is more specific and related to my research topic. Both the third and fourth qualitative research experts affirmed that the research question and interview questions were aligned well.

The original interview questions are in Appendix A while the revised interview questions following the feedback from the field test are in Appendix C. Nobody suggested any changes to the research question or including other research questions. The research experts were helpful in evaluating my interview questions for any ambiguities to facilitate the collection of relevant data from the research participants and also provided valuable input that could be useful in answering the research question and addressing the gap in the literature.

## Procedures for Recruitment, Participation, and Data Collection

The recruitment of individuals for the study only occurred after obtaining approval from the Institutional Review Board to conduct the study, and the approval number is 10-27-16-0435406. I adhered to the guidelines of the board and contacted them

once I was ready to embark on the recruitment and data collection process. The required documents that I submitted to the Institutional Review Board included the application form that contained information on the data collection process. The other submitted documents for review were the letters of cooperation, expression of interest and the consent form.

**Letters of Cooperation**

The Institutional Review Board approved the draft of the letter of cooperation that I submitted before sending it to the five organizations that were potential participants of the study. I sent the letters of cooperation to a mining company, the Ministry of Mines, Energy, and Water Development, the environmental protection agency, a nongovernmental organization, and the local media that might facilitate the acquisition of the required information for the study. The Institutional Review Board also approved the flyer (Appendix F) that I developed to recruit research participants from the local community that reside near the mining company. The letters were required to gain access to the respective organizations and obtain permission in recruiting the research participants.

**Expression of Interest**

The Expression of Interest in (Appendix E) is the email that I sent to the potential research participants in the mining company and the different stakeholder groups. The email was necessary to identify the individuals that might be interested in participating in the study. There was also a brief description of the study in the email, and I provided detailed information of the research procedures and participation in the consent form.

**Consent Form**

The consent form contained significant information on the rights of the research participants. I also provided information relating to the privacy and confidentiality of the participants and their freedom to withdraw from the study at any time without any judgment or penalty. The other information contained in the consent form includes the voluntary nature of study, the duration of the interviews, and secure data storage aimed at protecting the interests of the participations

**Data Collection Plan**

There were many aspects under consideration in selecting the research participants and collecting data. Careful planning before and during data collection as well as the selection of appropriate research participants is imperative to obtain valuable information from a study (Marshall, et al., 2013). It was thus necessary to plan appropriately and allocate sufficient time for the research process. The sampling approach was purposeful sampling to select individuals that could provide rich information regarding stakeholder influence (Suriz, 2011). I thus collected data from a mining company, the Ministry of Mines, Energy, and Water Development, the environmental protection agency, a nongovernmental organization, the local media and the local residents of a mining town.

Data collection involved the use of the interview protocol with open-ended questions to obtain detailed responses from the participants (Babbie, 2014). The research plan for this multiple case study was to interview 24 organizational leaders from a mining company and the major stakeholder groups. I thus conducted one-on-one interviews with

four people within each stakeholder group and had a total of 24 semi-structured interviews. Each interview lasted between 40 and 50 minutes, and the entire data collection process took about seven weeks. The digital audio recorder was useful in recording the interviews, and the research participants were aware of this aspect.

I transcribed the interviews and used member checking to ensure that the transcripts reflected the perspectives of the research participants and hence enhance the trustworthiness of the study. Some of the significant considerations of the interview process included selecting a conducive or comfortable setting for the interviewee as well as a quiet area. The other important factors were creating good rapport, a safe and non-threatening environment, including showing gratitude and care (Collins & Cooper, 2014). I thus respected the interests of the research participants during the interviews. The interview protocol (Appendix D) was a useful tool in promoting consistency throughout the data collection phase.

The conclusion of the interviews included expressing gratitude for the opportunity to collect the data and informing the research participants concerning the safe data storage and destruction after five years. I also kept a reflexive journal regarding my personal reflections and other observations to minimize biases. The other data collection plan was public document review. I reviewed public documents on environmental policies and other aspects related to environmental issues from the environmental protection agency. The review process also reflected some of the views articulated by the research participants.

## Data Analysis Plan

The data analysis plan was connected to the research question: How do stakeholders influence the implementation of environmental policies and mining operates to promote environmental sustainability in Zambia? Adequate planning, proper data collection, and analysis were essential aspects to consider to obtain reliable research findings that could sufficiently address the research question. The ability of the researcher in data collection, interpretation, and making sense of the data are crucial in understanding phenomena (Leedy & Ormrod, 2013). I thus reviewed relevant information related to data collection and analytical strategies.

Yin (2014) inferred that data analysis involves examining, classifying, arraying and displaying data in different ways, searching for patterns, insights and concepts, and drawing conclusions. During data analysis, I thoroughly read through the interview transcripts and field notes to have a better understanding of the issues under exploration. I also wrote memos, compiled the data, and saved it as a Microsoft Word document. Memos are among the essential techniques in developing a person's ideas (Maxwell, 2013). The memos capture the researcher's reflections and thinking process concerning the data, and the researcher strives to synthesize the data into higher levels of analytical meanings (Babbie, 2014; Miles et al., 2014). I thus wrote the memos during data collection and analysis that could be useful in the write-up of the research.

I transcribed all the recorded semi-structured interviews, conducted member checking and hand-coded the data. The hand-coding process involved an exhaustive review of the transcripts to identify the common phrases and develop the codes. I read

through the transcripts several times to avoid missing any salient points. Microsoft Excel was valuable in organizing the data using matrices. The personal information of the research participants was absent from the coded data, and only their perspectives were presented and analyzed. The columns and rows facilitated the arrangement of the codes and the identification of the emerging themes from the interview transcripts.

Once I completed the coding process, I reviewed the transcripts again to pinpoint any other themes that I might have missed. There were coding and identification of the themes for stakeholders representing the mining company and then for each stakeholder groups. The information was then combined for all the stakeholder groups to conduct the analysis as a whole. Secure data storage and having backup files for all the data was also important through Dropbox, flash drive, and external hard drive.

NVivo 10 software was an essential computer-aided tool in organizing and managing data for analysis. NVivo was also useful in coding and categorizing the data. Coding involves condensing data into readily analyzable units and assembling related chunks of data (Miles et al., 2014). NVivo makes it possible for the researchers to directly code data into appropriate classifications from a paper-based exercise and facilitating the coding of critical concepts that emerge from the data (Smith & Firth, 2011). Researchers can combine field notes, tapes, and transcripts and connect sound bites or video extracts to codes using NVivo (Tessier, 2012). I thus uploaded the transcripts into NVivo software to manage the data more efficiently and be able to identify the emerging patterns from the data.

During data analysis, I also referred to the conceptual framework to determine if there were any connections to the data that I analyzed. Babbie (2014) validated the significance of carefully examining the data to discover underlying meanings and patterns in qualitative data analysis. I thus conducted further data reviews of the data under NVivo to avoid omitting significant factors. Data analysis using NVivo 10 also involved analyzing individual stakeholder groups to identify the themes and patterns. Final analysis involved collectively examining the data from the mining company and all the stakeholder groups from the Ministry of Mines, Energy, and Water Development, Zambia Environmental Management Agency, a nongovernmental organization, the local media, and the local people that reside near the mining company.

## Issues of Trustworthiness

Evidence of trustworthiness from a study might contribute to the acceptance of the research outcome as adding valuable information to the existing body of literature. One of the main challenges for qualitative researchers is striving for quality through trustworthiness (Cope, 2014). It was thus necessary to take the appropriate measures of enhancing the trustworthiness of the study. NVivo software that was useful in data analysis created an audit trail that indicates the decisions made in the course of research and hence augments the trustworthiness of qualitative research (Houghton et al., 2013; Sinkovics & Alfoldi, 2012). The criteria that researchers use in determining the trustworthiness of a study include credibility, transferability, dependability, and confirmability (Houghton, et. al., 2013) that I applied in conducting the study.

**Credibility**

Research credibility focuses on the accuracy of the research findings, and it can be created when the researcher's interpretations are congruent to the supporting data (Munn, Porritt, Lockwood, Aromataris, & Pearson, 2014; Watkins, 2012). It was thus important to understand the research context and interpret data based on the responses from the research participants and the documents reviewed. Thomas and Magilvy (2011) deduced that spending more time with the research participants, reviewing transcripts, and using the words of the participants can help in making the research more credible. Therefore, I spent adequate time with the research participants during the interviews and exhaustively reviewed the transcripts to have a robust understanding of the issues under exploration.

Paying detailed attention and taking all the steps advocated by some qualitative research authors in data collection and analysis was essential to produce accurate research results based on the responses of the participants. For instance, Cope (2014) explained that member checking in which the researcher provides a synopsis of the emerging themes to obtain feedback from the participants promotes research credibility (Cope, 2014). Member checking was thus a significant action as I ensured that the participants had an opportunity to review the transcripts for any misunderstandings or inaccuracies and hence make any required corrections.

Researchers also enhance the credibility of a study through triangulation, an audit trail that documents the decisions of the researcher, a record of the interview transcripts, data analysis notes, and other research materials (Anney, 2014; Cope, 2014; Houghton,

et. al., 2012). Method triangulation that is commonly used in qualitative research may include interviews, field notes, and observations (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014). Having multiple data sources such as interview transcripts, review of documents, field notes, spending adequate time with the research participants, having an audit trail, and journaling enabled me to have a comprehensive view of stakeholder influence in promoting environmental sustainability.

**Transferability**

Transferability assesses the extent to which the research findings could be applied in other settings under similar conditions (Watkins, 2012). Strategies for ensuring transferability include providing rich and detailed descriptions of the study (Thomas & Magilvy, 2011). Consequently, I gave detailed accounts of the natural settings and offered in-depth descriptions of the data collection and analysis process. There was also thorough explanations of the emerging patterns and themes. The sampling procedure for the study focused on the procurement of rich information through a purposive sampling of organizational leaders within a mining company and the major stakeholders. The study could be transferable to other mining towns of Zambia with similar conditions.

**Dependability**

Research dependability is another notable aspect of promoting the trustworthiness of a study. A logical research process where there is an alignment of the research approach and the research question that are clearly documented and noticeable could augment the dependability of a study (Munn et al., 2014). Dependability is also promoted through an audit trail and reflexivity (Houghton et al., 2013). I provided an audit trail that

indicates the various steps that I took and the decisions made in the research process. I also kept a reflexive journal that contains information on personal reflections and occurrences in the field to address research dependability issues.

**Confirmability**

Confirmability is the last element under the considerations for promoting the trustworthiness of the study. Confirmability is augmented by providing descriptions regarding the decisions that the researcher made in making interpretations and drawing conclusions, such as providing detailed information or quotes from the research participants in portraying the emerging themes (Cope, 2014). I provided an audit trail of all actions and decisions during data collection and analysis.

Minimizing researcher bias through reflexivity could promote research confirmability (Watkins, 2012). A reflexivity journal in which I recorded my thoughts, reflections, and other events that occurred during data collection was valuable in addressing researcher bias (Anney, 2014). According to Simundic (2013), researchers must be aware of possible bias sources and strive to minimize bias by being objective and not allowing their perspectives to influence their research. As a result, I adhered to the guidelines for promoting research confirmability and other aspects aimed at increasing the trustworthiness of the study for the research findings to be meaningful or useful.

**Ethical Procedures**

Ethical procedures involved obtaining approval to conduct the study and the Institutional Review Board approval number for the study is 10-27-16-0435406. There were no foreseeable major risks or harm of being a research participant. The research

recruiting process did not involve targeting individuals from protected groups listed by the Institutional Review Board. The invitational email for research participation clearly indicated the required criteria for participation. There was no compensation for participating in the study and I explained the entire interview process for the potential participants to make informed decisions.

The other paramount ethical considerations included conducting the study in a manner that promotes beneficence, justice, and respect for myself and the research participants (Aluwihare-Samaranayake, 2012). There are recommendations for researchers to acquire signed informed consents from the participants before collecting data and to focus on protecting their rights, identity, and other confidential issues to have a socially responsible and acceptable study (Aluwihare-Samaranayake, 2012; Babbie, 2014). I thus took the necessary steps to protect the rights and interests of the research participants that included having them sign the informed consents.

Research participation was voluntary, and the potential participants were aware of this fact through the information provided in the consent forms. The consent forms also contained information relating to the purpose of the study, the durations for the study and the right of the participants to withdraw from the study at any point. I informed the participants that I would destroy all the notes and erase all recordings in their presence if they no longer wanted to participate. For the completed interviews, the participants got the interview transcripts to review them for accuracy and offer feedback within 48 hours. There were no revisions to the transcripts by the respondents.

The responses to the questions were private and securely stored. My computer is password protected, and all the field notes and recordings are locked in a safe. I removed all the personal information from the transcripts and used numbers for identification purposes. I will destroy all the data in the form of field notes, recordings, and transcripts after five years. The research participants were also anonymous in the publication of the research findings.

## Summary

In Chapter 3, I described the research methodology of the proposed study. Some of the important aspects of the chapter include the rationale for conducting a qualitative exploratory multiple case study, the purposive sampling method, the role of the researcher, data collection, and plan of analysis. The other significant contents are issues of trustworthiness that can be achieved through research credibility, transferability, dependability, and confirmability. Ethical considerations are also important in protecting the rights and privacy of the research participants. Chapter 4 will contain information on the research setting, the participants, data collection, and analysis. Evidence of trustworthiness and the research results will also be part of Chapter 4.

# Chapter 4: Results

The purpose of this qualitative multiple case study was to gain an in-depth understanding of how stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability in Zambia. Data collection involved the use of semistructured interviews with 24 research participants. I purposively sampled participants from a mining company; the Ministry of Mines, Energy, and Water Development; ZEMA; a nongovernmental organization; local media, and local residents living in the vicinity of the mine I studied. The central research question was: How do stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability in Zambia?

A review of past literature revealed a research gap related to stakeholder influence in the extractive industries of developing countries as environmental responsibility issues are unclear and require further research (Maconachie & Hilson, 2013). This chapter includes a presentation of the research results based on the perspectives of the research participants. Chapter 4 also contains information relating to the setting of the study, demographics of research participants, and data collection and analysis procedures. I also include an overview of results and a summary and transition to Chapter 5.

## Research Setting

This qualitative multiple case study involved six groups from which I selected research participants. The first group was a mining company located in the Copperbelt Province of Zambia where there are major mining activities that contribute to air, soil, and water pollution; geotechnical issues; land degradation; and other environmental

problems (Lindahl, 2014). I conducted face-to face-semistructured interviews with four mining organizational leaders at their workplace.

The second group consisted of research participants from the Zambian Ministry of Mines, Energy, and Water Development, which is responsible for managing mineral resources and regulating the development of the mining sector. The participants in the third group worked for ZEMA, which is the environmental protection agency in the country (Chifungula, 2014). The last three groups comprised research participants from a nongovernmental organization interested in environmental issues, local media, and the people that live near the mine. The interview setting for the stakeholder groups was a private room in the local public library or the participants' workplaces depending on their preference.

## Demographics

Data collection from the 24 research participants commenced after obtaining approval from Walden University's Institutional Review Board to conduct the study. The research participants signed consent forms indicating their willingness to participant in the study. Table 1 provides information on research participants. Participants in one group included managers and directors of a mining company, a nongovernmental organization, and the Ministry of Mines, Energy, and Water Development. Occupational groups represented in the other stakeholder groups included information and enforcement officers, inspectors, coordinators, training officers, teachers, engineers, accountants, and journalists. The number of research participants was 15 males and nine females. The study was voluntary, and there was more interest for research participation from males.

Table 1

*Distribution of Research Participants*

| Group | Number of Males | Number of Females |
|---|---|---|
| Mining company | 3 | 1 |
| Ministry of Mines, Energy, and Water Development | 4 | 0 |
| Zambia Environmental Management Agency | 2 | 2 |
| Environmental nongovernmental organization | 2 | 2 |
| Local media | 2 | 2 |
| Local community | 2 | 2 |
| Total | 15 | 9 |

## Data Collection

Data collection was through semistructured interviews with the managers and directors of a mining company that is in the Copperbelt Province of Zambia. The other stakeholder groups included the Ministry of Mines, Zambia Environmental Management Agency, an environmental nongovernmental organization, local media, and the residents of the mining town. I used flyers to recruit local resident research participants aged above 18 years (see Appendix F). I also sent invitations requesting participation to the other stakeholder groups and scheduled one-on-one interviews at the convenience of potential research participants. Participants had to sign the informed consent form once they expressed their willingness to participate in the study.

The interview process involved recording the responses of research participants using a audial digital recorder. I obtained permission from the participants to record their responses. The interviews lasted between 40-50 minutes, and the whole data collection

process took about seven weeks. I transcribed the interviews and used member checking to ensure that I captured the correct responses during the interviews. I typed the transcripts, saved them as a Word document, and emailed them to participants to verify the accuracy of the information presented. I asked them to provide feedback within 72 hours if changes were necessary. Only one person responded requiring a minor change that I addressed.

I did not find any variations between the data collection plan and the actual data that I collected from the 24 research participants. I interviewed four people from each stakeholder group using open-ended questions. The workplace was suitable for some of the participants while others opted to use a private room at a public library. The interview location was based on the preference of the research participants. The interview protocol (see Appendix D) facilitated the acquisition of data in a consistent manner from all the participants.

The data collection process also involved taking field notes while conducting the interviews. I recorded any pertinent occurrences or thoughts in a notebook while collecting data. Public document review of the environmental laws and regulations was another means of collecting data. I reviewed the public documents related to environmental issues from the environmental protection agency and other government agencies. The information in the documents also reflected some of the views expressed by the participants. I securely stored all the data and will destroy everything after 5 years.

## Data Analysis

I followed the data analysis plan presented in Chapter 3. Data analysis involved transcribing the recorded interviews and serving the transcripts as a word document. I replaced the names of the participants with numbers to enhance the anonymity and confidentiality of the participants. The other procedures included compiling, examining, classifying, arraying and displaying data in different ways, searching for patterns, insights and concepts, and drawing conclusions (Yin, 2014). There was a rigorous examination of the collected data to identify the common phrases, emerging patterns and make inferences based on the perspectives of the research participants. I also wrote memos concerning the developing ideas as recommended by Maxwell (2013) to help in the analysis process.

During the analysis phase, I hand-coded the transcribed data to pinpoint the emerging themes and patterns from each stakeholder group. The hand-coding process involved a comprehensive review of the transcripts to capture all the relevant themes and patterns. The coding process involved reviewing the compiled data several times, categorizing the data, identifying the themes and repeating the entire process to minimize errors. Subsequently, I identified the emergent themes and made inferences. NVivo software was a valuable computer-aided tool in effectively organizing, managing, and storing the data for analysis. NVivo enables researchers to directly code data into appropriate classifications (Smith & Firth, 2011). I thus uploaded the transcripts into NVivo software for proper and efficient data management.

## Evidence of Trustworthiness

Evidence of trustworthiness is a vital aspect to consider for the research outcome to be valuable. There were no adjustments to the issues of trustworthiness that I presented in Chapter 3. The NVivo software that I utilized during data analysis created an audit trail that illustrates the decisions made during the study and thus enhances the trustworthiness of qualitative research (Houghton et al., 2013; Sinkovics & Alfoldi, 2012). The criteria for determining the trustworthiness of a study that included credibility, transferability, dependability, and confirmability (Houghton, et. al., 2013) that I described in Chapter 3 was applicable.

### Credibility

Research credibility focuses on the accuracy of the research findings, and it can be created when the researcher's interpretations are congruent to the supporting data (Munn, Porritt, Lockwood, Aromataris, & Pearson, 2014; Watkins, 2012). There were no changes to the credibility strategies as I spent more time with the research participants, reviewed the transcripts, and used the words of the participants to make interpretations and conclusions. I also reviewed public documents to acquire more information relating to the study. I conducted member checking as advocated by Cope (2014) to ensure that the information contained in the transcripts reflected the viewpoints of the research participants.

As indicated earlier, researchers enhance the credibility of a study through triangulation, an audit trail that documents the decisions of the researcher, a record of the interview transcripts, and data analysis notes (Anney, 2014; Cope, 2014; Houghton, et.

al., 2012). I thus followed the above guidelines to promote research credibility. Data triangulation that involved multiple data sources that included interview transcripts, review of documents, field notes, and journaling also illustrates the evidence of research credibility.

**Transferability**

Transferability evaluates the degree to which the research findings might be applicable in other settings under similar conditions (Watkins, 2012). The strategies for ensuring transferability include providing rich and detailed descriptions of the study (Thomas & Magilvy, 2011). I thus provided rich and detailed accounts of the natural settings and in-depth descriptions of the data collection and analysis process to enhance research transferability. The study might be transferable to other mining towns of Zambia with similar conditions.

**Dependability**

There were no adjustments to research dependability in promoting the trustworthiness of the study. The research process included an alignment of the research approach and the research question that were clearly documented and noticeable to augment the dependability of the study (Munn et al., 2014). An audit trail and reflexivity also promotes research dependability (Houghton et al., 2013) that I indicated using NVivo software and describing the different decision-making steps during the study. The reflexive journal in which I wrote my personal thoughts and reflections also addresses the research dependability aspects.

### Confirmability

The evidence of confirmability included providing descriptions of the decisions that I made in making interpretations and drawing conclusions, such as providing detailed information or quotes from the research participants in portraying the emerging themes (Cope, 2014). I also took measures to address research bias. Watkins (2012) reported that minimizing researcher bias through reflexivity could enhance research confirmability. The reflexivity journal in which I recorded my thoughts, reflections, and other events that occurred during data collection was valuable in addressing researcher bias (Anney, 2014). I strove to reduce my bias by being objective and not allowing my experiences or perspectives to influence the outcome of the study (Simundic, 2013). I observed the guidelines for enhancing research trustworthiness for the research findings to be valuable.

## Results of the Study

The qualitative multiple case study involved a purposive sample of 24 research participants from a mining company, the Ministry of Mines, Energy, and Water Development, Zambia Environmental Management Agency, a nongovernmental organization, the local media, and the local people residing near the mine. The results section contains information related to the data that I collected from the six groups of the research participants through interviews and document review. The responses from the participants were the basis for theme generation. I analyzed one group at a time and then compiled the data for all the stakeholder groups.

The central research question for the study was: How do stakeholders influence the implementation of environmental policies and mining operations to promote

environmental sustainability in Zambia? I thoroughly reviewed all the interview transcripts to obtain data that might address the research question. The analysis process included compiling, examining, classifying, searching the data for patterns, insights, and concepts as recommended by Yin (2014). The perspectives of the research participants based on the interview protocol (Appendix D) facilitated the development of the codes and emergent themes.

## Emergent Themes

The creation of the codes occurred by assigning labels to the chunks of data that reflected the views of the research participants from the data as well as using their phrases. I then established the themes based on the emerging data from the interview questions. I ordered the themes based on the frequency of responses and thus presented the most occurring theme first. Table 2 illustrates the six generated themes from all the groups.

Table 2

*Codes and Themes from all Research Participant Groups*

| Interview Question | Codes | Themes |
|---|---|---|
| 1,2,5 | Environmental problems | Unsustainable human and mining activities |
| 1, 2, 4 | Inadequate enforcement, fewer resources, less manpower | Enforcement challenges |
| 4,7 | Environmental management, coordination, enforcement, CSR practices, create awareness, collaboration | Recommended implementation strategies |
| 2, 3 | Preservation, conservation, protection, Long-term benefit, protecting people, plants, animals, present and future use Workshops, licenses, articles, forum, awareness, reports | The need for environmental sustainability |
| 1,2,5 | No/less commitment for environment people, profit making, cost saving, pollution, irresponsible practices | Lack of corporate social responsibility |
| 6 | Workshops, licenses, articles, forum, awareness, reports | Involvement and creating awareness |
| 2,5 | Lack of machinery, equipment/technology | Technological problems |

**Theme 1: Unsustainable Human and Mining Activities**

The first, second, and fifth interview questions contributed to the development of the unsustainable human and mining activities theme. In the first question, I asked the participants to briefly tell me about some of the environmental problems that they encounter in their community. The second question was about indicating the leading

causes of the identified problems while the fifth question was related to mining activities. A careful review of the compiled data from all the stakeholder groups revealed that all the 24 research participants (100%) were aware of the prevailing environmental problems that they attributed to poor human practices and mining activities.

The identified problems ranged from air, noise, water, and underground pollution, land degradation, soil erosion, the death of animals and plants, deforestation, waste disposal, mine waste, climate change, sulphuric acid, and groundwater contamination. All the four mining organizational leaders (100%) acknowledged the existence of environmental problems and conceded that mining processes contribute to pollution, deforestation and other environmental issues. Participant 1 asserted that "Pollution by chemicals from the mine and gas fumes cause choking and health problems for the residents near the mine."

Participant 2 also affirmed the incidence of pollution and admitted to the problem of "oil spillage and effluents that pollute the environment and the river." The other issues include "cutting of trees for charcoal and this has led to deforestation," according to Participant 4. The participants from the mining company indicated that they were aware of the environmental issues that were a major concern.

In analyzing the data as a whole, all the 24 research participants (100%) involved in the study admitted that there were various environmental and social problems within their communities. Mining processes and ignorance of the people regarding waste disposal and other practices were some of the causes of environmental problems

according to 18 research participants (75%). Six participants (25%) attributed extensive pollution and other environmental problems to solely the mining company.

Participant 5 from the nongovernmental organization indicated that “Mining activities release harmful chemicals into the air and water. The people in the community also dump garbage in the open that become breeding grounds for diseases.” Participant 9 from the local community complained that “I work in the mine underground and it is very dusty. We have no protective clothing, and the masks are old. Pollution is a big problem from our mine.” The other participants from the local community group indicated that they cannot grow anything from their gardens due to the degraded land caused by pollution from the mine.

Participant 17 from the local media explained that the local community contributes to environmental problems through “open burning, littering of all sorts of waste including medical waste.” Participant 21 from Zambia Environmental Protection Agency stated that “Mining effluents are discharged into the streams and rivers. There is also air pollution through gaseous emissions from mining activities.” Participant 13 from the Ministry of Mines, Energy and Water Development noted that “Mining operations cause pollution and unfortunately the local community is not enlightened with environmental rights.”

**Theme 2: Enforcement Challenges**

The theme of enforcement challenges mostly emerged from the fourth question where the participants articulated their perceptions of environmental laws and regulations in Zambia. All the 24 participants (100%) indicated the lack of enforcement of the

environmental laws and regulations. A review of the public documents from Zambia Environmental Management Agency revealed detailed provisions of environmental protection and pollution control covering air, water, noise, waste management and other aspects. There were also enforcement provisions in the documents. However, all the participants referred to the weak implementation of the laws including those from Zambia Environmental Management Agency.

Participant 21 from Zambia Environmental Management Agency affirmed that "Regulations and laws are good, but they have gaps that need further strengthening especially on enforcement." Another participant from the same organization asserted that "The laws are there, but there is poor enforcement due to lack of funds and capacity for enforcement." Additionally, Participant 23 explained that "There are few inspectors to manage the increasing environmental problems in the country."

Participant 24 also confirmed the limited resources for enforcement and noted that there is a need for "expansion in other provinces. ZEMA only has four offices in Zambia." There were similar sentiments from the other stakeholder groups such as Participant 3 from the mining company who claimed that "The laws are adequate, but there are just on paper as there is no implementation to safeguard the environment." Participant 2 noted that "Though the laws are there, people still cut trees illegally and there is pollution because of ineffective enforcement due to inadequate manpower and resources."

Participant 16 from the Ministry of Mines confirmed that "Environmental laws and regulations in Zambia have been developed, but enforcement is poor due to

insufficient infrastructure and human capital. There is room for improvement if more resources are invested in this area." Participant 5 from the nongovernmental organization claimed that "Most of the workers from the environmental body are corrupt and would in most instances prepare reports that favor companies at the expense of environmental protection." The local community stakeholders also alluded to the poor enforcement of the environmental laws and regulations.

According to Participant 11, "There is no implementation of the environmental laws. Just look at the surrounding environment. Sometimes you can smell the gases in the air and deforestation is a big problem." Participant 12 expressed the same view emphasizing that "The is a very weak implementation of the laws and regulations." Participant 18 from the local media indicated:

The laws exist but lack enforcement due to various factors. Fragmentation in the law is another factor. An example is where ZEMA rejected mining project in the lower Zambezi National Park, but the Ministry of Mines allowed the project because the minister's powers supersede ZEMA. Fortunately, civic society organizations sued, and the matter is in the courts.

In reviewing public documents, I was able to confirm the above assertions in which the environmental activists protested the mining project and some of the people were arrested. Participant 11 from the local community group noted that "The laws and regulations are in place, but they lack a credible enforcement body. The current protection agency does not enforce or monitor issues pertaining to the environment mainly due to inadequate funding by the government." Participant 11 further explained

that the protection agency “does not seem to have a robust program to monitor major culprits of pollution and rarely inspect companies that emit gases.”

**Theme 3: Recommended Implementation Strategies**

The last interview question involved obtaining data regarding the practices that mining organizational leaders and other stakeholders must implement to reduce environmental problems. All the 24 research participants (100) offered recommendations on how to minimize environmental issues ranging from creating more awareness, planting trees, collaborating, obtaining more government support, effective waste management plans, and implementing corporate social responsibility aspects. The four participants (100%) from the mining company alluded to the significance of acquiring better or improved technology to improve mining processes.

Participant 1 stressed that “There is great need to buy modern technology to improve the processing methods.” Participant 3 indicated that “The machines are old and we need investors.” Participant 4 emphasized that “It is a great challenge to minimize pollution as we simply do not have the means. Do not get me wrong, we are concerned about protecting the environment, but it is not easy.” Participant 2 stated that human activities also contribute to pollution adding that “The people cut trees and burn them for charcoal for home consumption. There should be stiff punishment for illegal activities.” There were also suggestions for government support.

The four participants (100%) from the nongovernmental organization also provided recommendations on how to mitigate environmental problems. Participant 5 noted that “The local community should be involved in mining projects from inception to

its execution." The government should have individuals at each ministry who will be involved in environmental sustainability issues." The views of Participant 7 were that "Living in a clean and healthy environment is recognized by international law and treaties as a human right. Therefore, mining corporations must be held accountable for the environmental and human impacts of their operations." According to Participant 8, "Organizational leaders should adhere to environmental laws and also invest in the replenishment of the environment."

Similarly, the four participants (100%) from the local community group proposed various measures to alleviate environmental problems. Participant 9 suggested that "There is need to plant trees and sensitize the community about the dangers of polluting the environment. Waste disposal should also be in designated areas." Participant 10 stressed that "Mining organizational leaders should implement what is on paper. I mean the environmental and social responsibility strategies to protect the people and the environment."

Participant 11 asserted that "Mining leaders should stop polluting the air, water, and land and take up corporate social responsibility practices. The government should also be more committed to protecting the environment." According to Participant 12, the mining organizational leaders "need to invest new technologies that will help curb pollution as a result of mining activities. Also, there should be visible and deliberate corporate social responsibility initiatives around pollution control that can benefit the community."

The four participants (100%) from the Ministry of Mines also alluded to the significance of corporate social responsibility and other practices in addressing environmental issues. Participant 13 explained that “Mining organizational leaders must implement practices in line with the submitted and approved environmental impact assessment to reduce environmental problems.” Participant 14 stressed the importance of “constantly engaging with the local communities, ZEMA, the Mines Safety Department, and other stakeholders over issues pertaining to the environment, and to constantly be in line with international best practices.”

The additional comments included “having environmental units at the mining company with qualified personnel on environmental management,” as indicated by Participant 14. Furthermore, the participant suggested “continuous improvement in managing industrial pollutants, accreditation to international standards and engaging independent environmental auditors.” Participant 15 alluded to “Environmental accountability towards the community and publication of environmental performance to the public.” Participant 16 emphasized that “Environmental management plans should be supported by adequate budget provisions to implement them. After all, the environment mining operations are impacting negatively belong to them and their children too.”

The other recommendations from the participants of the Ministry of Mines included introducing “environmental management practices in the school curriculum to create a strong base for environmental education among our future leaders” (Participant 13). The participant added that “advocacy in environmental protection needs to be stepped up to curtail to the minimum any political interference. The polluter pays

principle must also be enforced." Participant 15 remarked that "In the spirit of decentralization, local authorities must embrace sound environmental management practices and pass by-laws that support environmental sustainability.

Participant 16 recommended that "Journalists must also be trained to report on environmental matters to increase awareness on environmental management." The four participants (100%) from the local media group offered similar recommendations. For instance, Participant 17 referenced the significance of training journalists and affirmed that "New journalists should have mentors to write on environmental issues, sustainable projects, and help in creating awareness." The views of Participant 18 were that" The mining organizational leaders should follow the rules, regulations, and laws."

According to Participant 19, "There is need to get back to the people, help them, and involve them in making suggestions." Participant 20 supported the above perspective and declared that "The government must get the mining sector to implement long-term sustainability, and people need to push for sustainability implementation in the mines. The environment is a huge problem that must be addressed because it affects everyone."

Likewise, the four participants (100%) from Zambia Environmental Management Agency suggested various ways of promoting environmental sustainability. Participant 21 explained that "Mining organizational leaders should invest in research and development of green mining technology. There should also be a minimization of waste, sustainable use and consumption of resources, recycling, and reuse." The participant further recommended more funding to enforce the laws more adequately. Similarly, Participant 22 referred to the use of modern technology within the mining companies and asserted

that “They should use modern methods of mining, and help fund small-scale entrepreneurs interested in environmental management.”

Participant 23 noted that “It is important to empower the people through education on environmental issues and how they can make a difference.” Participant 24 expressed the following views:

The government should put up strong monitoring systems. There is need to use cleaner production techniques in the mine. Waste materials should be used as a raw material and we must revegetate the land. ZEMA needs to expand and be in most provinces or districts so that enforcement can be done. Other people are able to get away because ZEMA offices are not there.

**Theme 4: The Need for Environmental Sustainability**

The third theme of environmental sustainability emerged from the third interview question in which I asked the research participants to define environmental sustainability and also included follow-up questions. The responses included environmental protection, preservation, conservation, and efficient use of resources for the benefit of the present and future generations as stated by 19 participants (79.2%). The other five participants (20.8%) provided responses that included the phrases environmental management, minimizing pollution, restoring land, and protecting all forms of life.

Participant 22 from Zambia Environmental Management Agency asserted that “Environmental sustainability is kind of environmental management that caters for both the present and future generation.” According to Participant 3 from the mining company, “Environmental sustainability involves conserving the environment without polluting it

so that we can all benefit and the future generations." Participant 1 alluded to "Controlling and maintaining the environment in the production process to obtain continuous benefits for all creatures."

Participant 3 affirmed that "Environmental sustainability is keeping the environment well such as water, plants, and animals for the good of people. We should preserve the environment so that our children can benefit in future." Participant 13 from the Ministry of Mines defined environmental sustainability as "being able to live in an environment in such a manner that its quality is prolonged for your benefit and for the generations to come."

Similarly, Participant 14 defined it "as using the environmental resources to meet our current needs without compromising the environment's ability to meet or satisfy the needs of future generations." Participant 10 from the local community stated that "This is when a system to support the environment is put in place which is pro-environment like reporting of any pollution activities, environmental awareness campaigns, spelled out community empowerment and responsibility towards the environment." There was a general awareness of the aspects relating to environmental sustainability and the need to promote it.

**Theme 5: Lack of Corporate Social Responsibility**

When I asked the participants about their views regarding the mining organizational leaders' commitment to reducing environmental problems, 20 participants (83.3%) offered responses that led to the lack of corporate social responsibility theme. The phrases that resulted in the development of this theme included lack of commitment,

no organizational commitment, profit making, irresponsible practices, cost saving, poor waste disposal, and pollution that cause problems for the local community. Participant 6 from the local community group was of the view that “Mining corporate leaders are not committed to supporting sustainable programs. All they do is take advantage of the weak points of the laws and pollute the environment.”

Another stakeholder from the Ministry of Mines (Participant 15) claimed that “Some mining firms choose to harm the environment as a cost-saving measure.” Participant 19 from the local media group expressed similar sentiments regarding organizational activities and asserted that “Mining executives are more committed to the attainment of production rather than the reduction of environmental problems. This is mainly due to the pressure to reduce production costs and make profits for the shareholders.”

The lack of corporate social responsibility was also evident when Participant 22 indicated that there is very little commitment in some organizations and gave an example of a mining company that “continues to pollute Kafue River with effluents from its mining operations for years.” A public document review validated the above incidence as there is information concerning a water and sewerage company that shut down the pumps that supply water to the residents on December 6, 2016 due to the elevated levels of sulfate caused by mining operations. Participant 20 from the local media noted that “The lack of monitoring mechanisms has given some mining firms power to pollute the environment with impunity.”

Likewise, the perspectives of the participants from the nongovernmental organizations reflected irresponsible practices that contribute to pollution. Participant 7 explained that "While mine leaders may exhibit commitment in theory to preserve the environment through various corporate social responsibility interventions, in practice the desire for profits supersedes the commitment." According to Participant 5, "Mining corporate leaders are interested in profits at the expense of long-term effects on the people and the environment." Participant 24 from Zambia Environmental Protection Agency emphasized that "There is very little extra effort being made to reduce environmental problems."

Participant 15 noted that "They talk about it, but commitment is not there. They are reluctant to address or commit resources towards environmental management issues." The prevalence of pollution was also evident through the citations and penalties that some of the mining companies obtained in the past. Participant 20 asserted that in 2012, ZEMA ordered a mining company "to suspend part of its operations when the local community complained about acid mist from the leaching process." Similarly, Participant 22 alluded to a mining company that "was found guilty of gross negligence in the Zambian Supreme Court."

**Theme 6: Involvement and Creating Awareness**

In response to the interview question relating to the participants' involvement in influencing decisions that promote environmental sustainability or reduces environmental problems, 20 participants (83.3%) indicated that they were involved while four participants (16.7%) from the local community group indicated a lack of involvement.

Participant 9 from the local community group conceded that “I am not really involved as I feel like my voice is not heard” while Participant 10 noted that “There is nothing I can do as the government is aware of our problems and does nothing about it.” Participant 11 conceded that “I have no influence at all and do not know how I could make a difference.”

Conversely, all the four participants (100%) from the nongovernmental organization indicated more involvement and creating awareness on environmental issues. The involvement of Participant 5 includes “Advocating for support by policy makers in environmental issues including forming environmental management watchdogs at various levels. I also advocate for the revision of environmental laws with the introduction of punitive measures for the violators.” Participant 6 alluded to working in “collaboration with government ministries in promoting income generation that does not harm the environment.” The other responses from Participant 7 were that “I have been involved in environmental, water resource, wildlife, forest and climate change policy advocacy for three and a half decades. This has included public interest litigation.”

The four participants (100%) from the local media group asserted that they create awareness by writing articles and reporting on environmental issues. For instance, Participant 18 declared that “As a journalist, I help to create awareness using the column called Earth Forum that runs every Monday. I also work with state agencies to create awareness through environmental reporting and other activities.” Another journalist noted that he writes about “The alertness of environmental problems and my articles include the effects of climate change in Zambia.” Participant 19 claimed involvement in

"sensitization programs on environmental problems" while Participant 20 referred to "providing reports on environmental issues."

Similarly, the four participants (100%) from the mining company alluded to being involved in creating awareness among their employees and the community. According to Participant 2 from the mining company, I help in offering workshops to employees to minimize spillage and other operational aspects." Participant 4 noted that "I am involved as I am in charge of the structural designs and effluent drainage systems aimed at minimizing pollution." The other participants claimed that they raise environmental awareness in their community.

The four participants (100%) from the Ministry of Mines described their involvement as providing licenses to prospective companies and other aspects related to the management of minerals and other natural resources. Participant 14 declared that "I am involved in monitoring license prospects and to ensure that the license holders are compliant to the approved programs that include ensuring environmentally friendly activities." Participant 15 provided the following statement:

I head the Ministry of Mines that basically addresses the environment, safety, and health issues through its department called the Mines Safety Department. This is a regulatory body and my contribution would be through the stewardship of this institution to regulate the mining industry.

The perspectives of Participant 16 were that "As a mining law enforcement officer, I influence decisions that promote environmental sustainability through the formulation of laws, policies, and regulations aimed at the reduction of environmental

pollution." Participant 21 from Zambia Environmental Management Agency referred to his involvement that included carrying out "environmental inspections, licensing, and also doing compliance monitoring on facilities." Participant 23 from Zambia Environmental Protection Agency asserted that "I encourage people to protect the environment through awareness programs such as participation in commemorations that include environmental day and world water day."

**Theme 7: Technological Problems**

The lack of modern technology for mining operations contributes to pollution according to four mining organizational leaders (16.7%). Participant 2 who was a mining organizational leader acknowledged that "We know that mining processes cause environmental problems, but we have no modern technology to help prevent oil spillage and other issues that cause pollution." The views of the other mining participants were that the organization did not have the equipment or the machines to reduce environmental impacts of mining activities. The participants from the mining company noted that the limited financial resources present challenges to address technological issues.

### Similarities and Differences in Theme Generation Among the Groups

There were many similarities in the themes generated among the research groups. One of the major differences was the technological problems theme that emerged only among the mining organizational leaders as indicated in Table 3. The four participants (16.7%) out of the 24 total participants asserted that they use old machines and poor technology that cause environmental problems. The rest of the 20 participants (83.3%) alluded to other factors that led to the theme of lack of corporate social responsibility.

Table 3

*Theme Generation from the Mining Organizational Leaders*

| Interview Question | Codes | Themes |
|---|---|---|
| 1,2 | Environmental problems | Unsustainable human and mining activities |
| 2,5 | Lack of modern technology, no equipment, old machines | Technological problems |
| 4 | No implementation, inadequate manpower, less resources | Enforcement challenges |
| 7 | Plant trees, new technology, create awareness, proper waste disposal, better processing, minimize pollution | Recommended implementation strategies |
| 1,2,3 | Lasting benefits, preserving life, future generations, efficient use, conserve water, protect people, preserve nature | The need for environmental sustainability |
| 6 | Workshops, awareness | Involvement |

The other difference is that four research participants (16.7%) from the local community group indicated a lack of involvement in influencing decisions that promote environmental sustainability or reduces environmental problems. The remaining 20 participants (83.3%) reported involvement or creating awareness. Table 4 indicates the theme generation from the local community group.

Table 4

*Theme Generation from the Local Community*

| Interview Question | Codes | Themes |
|---|---|---|
| 1,2 | Environmental problems | Unsustainable human and mining activities |
| 6 | Community ignorance, lack of awareness, lack of participation | Lack of Involvement |
| 2, 4 | Weak or poor enforcement, low penalties, inadequate government funding, less inspections, | Enforcement challenges |
| 7 | Obey laws, protect environment, people, government support, pollution control, corporate social responsibility practices, improve waste disposal education, sensitization, community involvement | Recommended implementation strategies |
| 2,3 | Future use, flourishing, preservation, future benefit, future generations, conservation, | The need for environmental sustainability |
| 2, 5 | Poor processing, profit making, unsustainable organizational practices, cause pollution | Lack of corporate social responsibility |

In analyzing the data from individual groups, I noticed that there was more involvement in policy advocacy and litigation issues by the nongovernmental organization than any of the other groups. All the four participants (100%) were also equally active in creating awareness. Table 5 indicates the themes from the nongovernmental organization.

Table 5

*Theme Generation from the Nongovernmental Organization*

| Interview Questions | Codes | Themes |
|---|---|---|
| 1,2,5 | Environmental problems | Unsustainable human and mining activities |
| 6 | Awareness, policy advocacy, education, litigation | Involvement and creating awareness |
| 1,2, 4 | Weak laws and regulations, corruption, poor implementation, political interference | Enforcement challenges |
| 4,7 | Environmental management, accountability, improved processes, enforcement, government support, community participation | Recommended implementation strategies |
| 2,3 | Future generations, efficient resource use, managing resources, benefits, welfare, safeguards, support life | The need for environmental sustainability |
| 2,5 | Pollution, profit interests, poor processes, poor environmental management, unaccountable | Lack of corporate social responsibility |

The responses from the local media group indicated creating awareness through writing articles and reports on environmental issues. The perspectives are similar among the groups regarding the incidence of environmental problems and the need to address them. There are slight differences in the use of phrases as illustrated in all tables for the

different groups. Table 6 indicates the common phrases and generated themes for the local media.

Table 6

*Theme Generation from Local Media*

| Interview Questions | Codes | Themes |
|---|---|---|
| 1,2 | Environmental problems | Unsustainable human and mining activities |
| 6 | Forum, awareness, articles, environmental reports, sensitization | Involvement and creating awareness |
| 2,4 | Weak enforcement, political interference, poor implementation, weak institutional frameworks | Enforcement challenges |
| 7 | Follow laws, rules, regulations, community involvement, clean production, government support, implement sustainability. | Recommended implementation strategies |
| 3 | Continued, indefinitely, benefits, resources, renewable, nature, present and future generations, undisrupted | The need for environmental sustainability |
| 2,5 | Pollution, no employee safety, profits, no commitment | Lack of corporate social responsibility |

Similarly, Table 7 indicates the phrases from Zambia Environmental Management Agency. Though there was indication by all the 24 participants (100%) from study that there are enforcement challenges to address environmental issues, the participants from Zambia Environmental Management Agency provided more detailed information regarding the problems they encounter in enforcing the laws and regulations. The

participants alluded to financial problems, few inspectors, and other aspects outlined in Table 7 that make it difficult to monitor environmental issues effectively.

Table 7

*Theme Generation from the Zambia Environmental Management Agency*

| Interview Questions | Codes | Themes |
|---|---|---|
| 1,2 | Environmental problems | Unsustainable human and mining activities |
| 2,4 | Weak implementation, financial problems, few inspectors, less monitoring, inadequate resources, inadequate enforcement, few offices | Enforcement challenges |
| 4,7 | Community participation, clean production, new technology, invest, plant trees, enforcement, more people, corporate social responsibility | Recommended implementation strategies |
| 2, 3,4 | Present and future generations, benefits, protection, conserving, welfare, resources, efficient, long-term | The need for environmental sustainability |
| 6 | Mining effluents, less commitment, no commitment, pollution | Lack of corporate social responsibility |
| 1,2,5 | Inspections, licenses, regulation, awareness, poor waste disposal | Involvement and creating awareness |

The research participants from the Ministry of Mines that is responsible for managing mineral resources and regulating the development of the mining sector also provided perspectives that reflected the views of the other research participants. The participants offered sentiments that led to the emergent themes indicated in Table 8 that are similar to those outlined for the other groups. The participants from the government

ministry recommended stakeholder collaboration and incorporating environmental management aspects into the school curriculum to create more awareness on environmental issues and hence promote environmental sustainability.

Table 8

*Theme Generation from the Ministry of Mines, Energy, and Water Development*

| Interview Questions | Codes | Themes |
|---|---|---|
| 1,2,5 | Environmental problems | Unsustainable human and mining activities |
| 1,2,4 | Poor enforcement, insufficient, infrastructure, manpower | Enforcement challenges |
| 4,7 | Stakeholder collaboration, accreditation, advocacy, pollution control, improve, school curriculum, environmental reports, awareness, accountability, responsibility, | Recommended implementation strategies |
| 2, 3 | Present and future benefits, conservation, protection, nature, live well, people, environment, maintenance | The need for environmental sustainability |
| 2,5 | Lack of compliance, cost saving, profits, less commitment, pollution. | Lack of corporate social responsibility |
| 6 | Mining license, monitoring, workshops, awareness | Involvement and creating awareness |

## Summary

Chapter 4 included the description of the setting of the study and the demographics of the 24 research participants from a mining company, the Ministry of Mines, Energy, and Water Development, Zambia Environmental Management Agency, a nongovernmental organization, the local media, and the local people residing in the

vicinity of the mine. The participants provided information to address the research question relating to how stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability. Data collection, evidence of trustworthiness, and the presentation of the results of the study are also significant aspects of this chapter. Chapter 5 includes the interpretation of the research findings, the limitations of the study, the recommendations, and the implications for social change.

# Chapter 5: Discussion, Conclusions, and Recommendations

Lack of environmental sustainability is a major global challenge and is made evident in extreme weather conditions, climate change, ozone depletion, global warming, persistent pollution, emerging diseases, and the decline and extinction of species (Kabai, 2013; Kinzig et al., 2013; Parkes & Borland, 2012). The purpose of this qualitative multiple case study was to gain an in-depth understanding of how stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability in Zambia. The study involved a purposive sample of 24 research participants from different stakeholder groups.

A qualitative multiple case study design was most fitting to collect relevant data from the various stakeholders. The collection of the data included the use of semistructured interviews with open-ended questions that led to the generation of themes. The data analysis process involved hand-coding and the use of NVivo to organize and manage data.

## Interpretation of the Findings

Data coding facilitated the identification of the common phrases to develop the themes. I generated the themes based on the perspectives of the research participants and presented the themes having the most frequent responses first. The emergent themes were unsustainable human and mining activities, enforcement challenges, recommended implementation strategies, the need for environmental sustainability, lack of corporate social responsibility, involvement and creating awareness, and technological problems.

The following is the presentation of the research findings in the context of my conceptual framework and the literature that I reviewed.

**Unsustainable Human and Mining Activities**

The 24 research participants (100%) indicated that unsustainable human and mining activities cause environmental problems within the community. All participants view tree cutting, open burning, poor waste disposal, and mining processes as leading to pollution, land degradation, soil erosion, the death of animals and plants, deforestation, climate change, groundwater contamination, and other environmental problems. One participant asserted that mining operations involve releasing "harmful chemicals in the air and water, and the gas fumes cause choking and health problems for the residents near the mine."

Findings from this study are consistent with the literature on environmental issues. Mining activities involve the extraction and processing of numerous resources that result in a high generation of waste and extensive pollution that cause environmental and social problems for local communities (Celebi & Özdemir, 2014; O'Faircheallaigh, 2015). The research outcome from most of the studies reviewed in the literature was that mining operations cause large-scale pollution in most parts of the world. In China, for instance, mining and smelting activities are reportedly the largest sources of pollution affecting human health, water, soils, and vegetables and other crops (Zhang et al., 2012).

Other researchers have inferred that mining processes cause deforestation, a great decrease in agricultural activities, and more poverty (Lawson & Benti, 2014; Schueler et al., 2011). The mismanagement of hazardous wastes from most of the mines in Africa has

also been found to cause acid drainage and poisonous chemicals to leach into the surrounding communities that affects the people's health and the environment (Blight, 2012; McCormack & Schuz, 2012). Furthermore, mining operations lead to land degradation, ground and surface water pollution, air pollution, loss of wildlife and vegetation, and health problems in most developing African countries (Celebi & Özdemir, 2014; Jordan & Abdaal, 2013; Littlewood, 2015). The existing literature thus indicates that the current environmental problems in African mining towns are due to mining activities.

**Enforcement Challenges**

Data analysis revealed poor enforcement of environmental laws and regulations as expressed by all 24 research participants. Some of the views included having "few inspectors to manage the increasing environmental problems in the country" and the "lack of funds and capacity for enforcement." Another participant noted that the environmental protection agency "does not seem to have a robust program to monitor major culprits of pollution and rarely inspect companies that emit gases." In broad terms, the standpoints of the participants are consistent with findings from existing literature regarding the challenges encountered by most developing countries in implementing environmental laws and regulations.

Celebi & Özdemir (2014) reported that there is more consideration of environmental risks and better enforcement of environmental policies in the developed countries than in the developing world. The lax environmental laws in the developing countries attract polluting foreign investors who want to avoid stringent environmental

standards in their country of origin and hence increase the likelihood of undermining the welfare of the people through increased pollution and resource depletion (Hassaballa, 2014). In evaluating the effectiveness of mitigating environmental impacts in Africa, Tan-Mullins and Mohan (2013) deduced that there was urgent need to develop legislative and institutional frameworks to address issues relating to the extraction of the natural resources, the environment, and transparency.

The weak enforcement of environmental legislation, small penalties for noncompliance, and corruption in developing countries have contributed to a lack of accountability for the environmental and social problems caused by mining activities (Campbell, 2012; Edwards et al., 2014; Hilson, 2012). Research findings in Ghana and South Africa, for instance, indicate that organizational leaders and employees do not often comply with the environmental laws and regulations because of weak enforcement and a lack of commitment by environmental protection agencies (Appiah & Osman, 2014; Diale, 2014). Implementation of environmental policies is thus a major challenge for most people in developing countries in Africa including those involved in this study.

**The Need for Environmental Sustainability**

The need for environmental sustainability was included in all participant responses. Responses included phrases such as environmental management, pollution control, restoring land, protecting all forms of life, and conserving or preserving the environment for current use and future generations. The participants were aware of environmental sustainability and the need to protect the environment. One participant alluded to the significance of "using the environmental resources to meet our current

needs without compromising the environment's ability to meet or satisfy the needs of future generations." The other viewpoints were obtaining "continuous benefits for all creatures," and preserving "the environment so that our children can benefit in future."

The participants further alluded to the significance of efficiently exploiting resources to prolong the quality of the environment and preserve it for the good of the present and future generations. Overall, the perspectives of the research participants are consistent with the assertions of O'Faircheallaigh (2015), who affirmed that the minerals in the environment are finite, and their depletion and mismanagement could present significant challenges for the current and future generations. Moldan et al. (2012) also validated the significance of preserving the natural environment as the resources in nature are exhaustible with limited capacities to support life.

Similarly, James (2013) reported that sustainability practices involve responsibly exploiting and safeguarding the natural resources such as minerals, water, oil, and other elements in the environment. My research findings indicate that the preservation of the water, plants, minerals, land, animals, and other creatures are essential for people to obtain continuous benefits from the environment. The research findings are thus related to the available literature on the importance of environmental sustainability.

**Lack of Corporate Social Responsibility**

The views of the 20 research participants (83.3%) reflected the lack of corporate social responsibility by the mining organizational leaders. The sentiments were that the organizational leaders are mostly interested in making profits and are not committed to preventing or addressing the problems emanating from their operations. For example, one

participant explained that “Mining corporate leaders are interested in making profits at the expense of long-term effects on the people and the environment.” The other views included reducing mining production costs to meet the demands of the shareholders for profit maximization. The research findings validate the lack of implementation of corporate social responsibility practices in most African developing countries based on the literature reviewed.

Pesmatzoglou et al. (2014) inferred that corporate social responsibility of the multinational corporations in the extractive industries of developing countries is mostly about promoting the company image without making any real difference in developing policies that protect the natural environment or the local communities. Moreover, some extractive organizational leaders in these countries blatantly ignore environmental regulations to reduce costs and amass capital resulting in severe ecological and social problems (Maconachie & Hilson, 2013). There is also insufficient empirical verification of the effectiveness and impacts of corporate social responsibility in Africa (Idemudia, 2014). Corporate social responsibility practices are thus seemingly not implemented to meet the needs of society in most African developing countries.

**Involvement and Creating Awareness**

There were 20 participants (83.3%) that described their involvement in environmental management and creating awareness on environmental issues. The four participants (16.7%) from the environmental nongovernmental organization were the most actively involved in creating awareness and public interest litigation. This research outcome corroborates the findings by Joensuu et al. (2014) who reported that the

environmental nongovernmental organizations are the most prominent civil society group that exerts enormous pressure for corporate leaders to become environmentally responsible. Likewise, Hoque et al. (2016) verified that only the nongovernmental organizations were raising awareness on pollution and other environmental issues out of the 11 groups surveyed in Bangladesh.

The four participants (16.7%) from the local media group also noted that they were involved in reporting on environmental issues by writing articles and through other forums. For example, one participant asserted that "As a journalist, I help to create awareness using the column called Earth Forum that runs every Monday." The involvement of the media is apparent in some studies relating to stakeholder influence. The media coverage on environmental issues has a significant role in raising public awareness on organizational practices, particularly by publicizing information on the dangerous effects of industrial pollution (Hahn & Lülfs, 2013).

Conversely, the four participants (16.7%) from the local community group indicated a lack of involvement in addressing environmental problems or creating awareness. The reasons for not being involved included the lack of knowledge on how to influence mining operations and create awareness on environmental issues. One participant indicated that "I am not really involved as I feel like my voice is not heard." According to Amran et al. (2013), the communities within which the mining organizations operate are one of the stakeholder groups that are usually ignored and hence the need for the government to create an awareness of environmental problems through educational processes.

The four participants (16.7%) from the Ministry of Mines indicated involvement relating to the management of minerals and the environment as well as creating awareness. The four participants were involved in monitoring mining license prospects and influencing decisions that promote environmental sustainability through the formulation of laws and regulations aimed at minimizing environmental problems. The Ministry of Mines is responsible for managing mineral resources and regulating the development of the mining sector (Chifungula, 2014).

There was involvement regarding the environmental inspections and licensing by the four participants (16.7%) from Zambia Environmental Management Agency that is responsible for the enforcement of the laws and regulations (Chifungula, 2014). The four participants were involved in the decisions relating to reducing pollution and other environmental problems. However, there are challenges in adequately and effectively enforcing the laws due to the limited resources as earlier illustrated in Chapter 4. There is corruption, inadequate government support, and poor enforcement of the environmental laws in most of the developing countries (Edwards et al., 2014; Hilson, 2012) that is also evident from the research results.

**Technological Problems**

The four mining organizational leaders (16.7%) attributed the incidence of pollution and other environment problems to the lack of modern technology. The participants acknowledged that they did not have the equipment or the appropriate machines to reduce environmental impacts of mining processes. For instance, one participant emphasized that “We have no modern technology to help prevent oil spillage

and other issues that cause pollution" while another one affirmed that "The limited financial resources present challenges to address technological issues." The technological problem established from the study supports the findings of some of the researchers concerning mining activities in Africa.

McCormack and Schuz (2012) concluded that most of the people in the African mines use technologies that are outdated and banned in the developed countries thereby aggravating the environmental problems. Furthermore, the inferior technologies, the poor disposal of the effluents, inadequate legislation, and the weak enforcement of the laws cause adverse environmental problems in most of the developing countries (Acheampong, Paksirajan, & Lens 2013; Esau & Malone, 2013). The old technologies thus present major challenges in the prevention or alleviation of environmental impacts resulting from mining operations.

## Limitations of the Study

The scope of this case study design that was delimited to a mining organization and its stakeholders limits the external validity of the study and the generalizability of the research findings to other organizations as indicated in Chapter 1. The purposeful sampling approach utilized in collecting data has an inherent bias, and the research results from the sample cannot be generalized to the larger population (Acharya, Prakash, Saxena & Nigam, 2013; Patton, 2002). Rich and dense description of the data helps in enhancing the transferability of the study (Thomas & Magilvy, 2011). I thus provided detailed accounts of the research process and used NVivo software. An audit trail

facilitated by NVivo and reflexivity might enhance the dependability and confirmability of the study (Houghton, Casey, Shaw, & Murphy 2013).

The other limitation is that the information obtained through semi-structured interviews may be inaccurate or misleading as the participants might have been untruthful in answering some questions. While there was no evidence, some of the research participants may have omitted important information while others might have purposefully exaggerated certain information and provided incorrect responses. The review of public documents may also have limitations relating to recording errors.

## Recommendations

The research findings revealed that all the four participants (16.7%) from the local community group were not involved in addressing environmental issues or creating awareness. Future research could thus include a qualitative phenomenological study to obtain more information based on the lived experiences of the people in the mining community. Such a study might offer more enlightenment about the residents' assumptions, beliefs, and perceptions of their experiences and how they could be actively involved in addressing the environmental issues that affect them.

Theme 2 (enforcement challenges) in Chapter 4 indicates that there is the lack of implementation of the environmental laws and regulations according to all the 24 research participants (100%). Therefore, it is necessary to further investigate the regulatory framework to identify the major factors that affect policy implementation. An applied mixed method approach could potentially facilitate the acquisition of qualitative and quantitative data that might help enhance the generalizability of the research

findings. The 24 participants (100%) offered various recommendations for alleviating environmental problems to promote environmental sustainability. The following recommendations are based on the emergent themes that reflect the perspectives of the research participants:

**Enforcement of the Environmental Laws and Regulations**

Themes 1 (unsustainable human and mining activities), 2 (enforcement challenges), and 5 (lack of corporate social responsibility) led to the recommendation of enforcing the environmental laws and regulations. The 24 research participants (100%) alluded to the poor implementation of environmental legislation by Zambia Environmental and Management Agency. The recommendations offered by 17 participants (70.8%) included the government's intervention in implementing long-term sustainability, providing more funding to enforce the laws more effectively, and developing robust monitoring systems. One participant suggested enforcing mechanisms that would force the mining organizational leaders to "adhere to environmental laws and invest in the replenishment of the environment."

The other recommendations among the 17 participants included imposing stiff punishment for illegal activities and increasing the fines for the violators to protect the environment and discourage misconduct. As earlier presented in Chapter 4, the environmental protection agency "only has four offices in Zambia" thereby making it necessary to "expand in other provinces" as noted by Participant 24 under the enforcement challenges theme. Diale (2014) inferred that the government should make more efforts to ensure the development of implementation mechanisms and severe

penalties. The government should thus be more committed to protecting the environment and assisting Zambia Environmental Management Agency to effectively enforce the laws.

**Education and Creating Awareness**

The recommendation concerning education and creating awareness stemmed from the themes involving unsustainable practices, the need for environmental sustainability, and the lack of involvement by the local community. Thirteen research participants (54.2%) provided responses that reflected the importance of educating people and creating awareness to address environmental issues. For instance, Participant 13 suggested introducing "environmental management practices in the school curriculum to create a strong base for environmental education among our future leaders." The 13 participants also proposed revegetating the land, involving everyone, and empowering the people through education on environmental issues and how they can make a difference.

For example, Participant 14 underscored the significance of "constantly engaging with the local communities, ZEMA, the Mines Safety Department, and other stakeholders over issues pertaining to the environment" to address environmental problems. Some authors have validated the importance of involving all the major stakeholders in mitigating environmental problems. Collaborative efforts among the local governments, the regulators, the employees, and the local communities to reform policy and promote environmental sustainability are necessary (Bhatasara, 2013; Parkes & Borland, 2012; Pesmatzoglou et al., 2014).

Community involvement is also imperative in addressing environmental issues. Participant 19 declared that “There is need to get back to the people, help them, and involve them in making suggestions.” The other viewpoints among the 13 participants (54.2%) include training journalists to effectively report on environmental matters and raise awareness on environmental sustainability as well as demanding for sustainability implementation by the government, enforcement agencies, and the mining organizational leaders.

**Investment and New Technology**

The results from the study revealed that the lack of modern technology (Theme 7) contribute to environmental problems and hence verifies Hassaballa’s (2014) findings concerning the use of old and outdated technology in developing countries. Consequently, investing in new technology could lessen the environmental impacts of mining operations as indicated by nine research participants (37.5%). According to Participant 12, the mining organizational leaders “need to invest in new technologies that will help curb pollution as a result of mining activities.” The other eight participants recommended investing in research and development of green mining technology, using cleaner production techniques, and modern methods of mining.

**Sustainable Practices**

The suggested implementation strategies included the adoption of sustainable practices to address environmental issues. The research findings are related to the literature regarding the significance of adopting corporate social responsibility practices. Corporate leaders have responsibilities that must exceed making profits to include

practices that meet environmental, ethical, and social obligations towards the community (Ayuso et al., 2014; Idemudia, 2014; Ghauri, 2015). This recommendation emanated from the unsustainable human and mining activities (Theme 1) and the lack of corporate social responsibility (Theme 2) that cause environmental problems.

Eight research participants (33.3%) provided recommendations related to implementing corporate social responsibility practices, revegetating the land, minimizing the generation of waste, sustainable use and consumption of resources, recycling, and reuse. For example, it was indicated that organizational leaders "be held accountable for the environmental and human impacts of their operations" according to one of the participants. Another participant emphasized that "There should be visible and deliberate corporate social responsibility initiatives around pollution control that can benefit the community."

The other suggestions among the eight participants (33.3%) included the implementation of the environmental impact assessments to mitigate environmental impacts. Moreover, there were recommendations to have environmental units at the mining company with qualified personnel on environmental management and continuous improvement in managing industrial pollutants. The views for increasing transparency included environmental accountability towards the community, publication of environmental performance, accreditation to international standards and engaging independent environmental auditors.

## Implications

The unprecedented and complex environmental problems including the recommendations for commitment in enhancing environmental sustainability by all the major stakeholders made it imperative to conduct the study (Kabai, 2013; Parkes & Borland, 2012). The research outcome included the generation of information that could be useful in addressing environmental issues and hence help in promoting environmental sustainability. The research findings may have significant implications for social change, theory, and practice.

### Implications for Social Change

The results of the study have potential implications for effecting positive social change in the lives of the people and the local community around the mining area. Positive social change is possible as the study focuses on addressing environmental problems that also cause health problems and other social issues (Jordan & Abdaal, 2013). The application of the research findings to prevent pollution, environmental degradation, and other problems might offer benefits to the people that reside near the mine. For instance, some of the research recommendations include the improvement of the enforcement of the environmental laws as well as the active involvement and collaboration of the different stakeholders to alleviate environmental problems.

The participation of the stakeholders such as the local communities, civil society actors, and government agencies could be helpful in addressing social and environmental issues (Littlewood, 2015). A positive social change could thus be effected through the creation of environmental awareness, community empowerment, and the implementation

of the recommended strategies that include revegetating the land, increasing the penalties for the violations, and increased government support. A sustainable environment could promote positive social change through the flourishing of life on earth over an indefinite time frame.

**Implications for Theory**

The research findings addressed the research gap in the related literature. Maconachie and Hilson (2013) recommended conducting studies in the extractive industries of developing countries that relate to the exploration of the factors that might influence organizational leaders to respond to the needs of the local communities. The information from the study could be useful in conducting future research that may lead to the advancement of knowledge or the development of a theory or models associated with stakeholder influence and environmental sustainability. The research results might also add to the existing literature on stakeholder theory, environmental responsibility and other aspects relating to leadership and organizational change.

**Implications for Practice**

The research outcome could be valuable in the professional applications of the research recommendations. The mining organizational leaders and other change expert agents may use the information from the study in formulating and implementing strategies aimed at promoting environmental sustainability. The perceptions of the different stakeholders regarding the activities of extractive industries could influence the development of organizational strategies by the organizational leaders (Maconachie & Hilson, 2013). The research outcome includes information on the need for collaboration

by the mining corporate leaders and the major stakeholders to collectively minimize environmental issues.

The government and Zambia Environmental Management Agency might apply the research findings to adequately enforce the environmental laws and regulations to promote environmental sustainability. The government could develop effective ways of raising awareness on the significance of environmental sustainability and introducing it into the school curriculum. The research results might also be applicable to the organizational leaders and change practitioners in managing stakeholder relationships and enhancing corporate social responsibility to promote the welfare of society and the environment.

## Conclusions

The purpose of this qualitative multiple case study was to gain an in-depth understanding of how stakeholders influence the implementation of the environmental policies and mining operations to promote environmental sustainability in Zambia. The study involved a purposive sample of 24 research participants from a mining company, the Ministry of Mines, Energy, and Water Development, Zambia Environmental Management Agency, a nongovernmental organization, the local media, and the local people residing near the mine. Data collection included the use of semi-structured interviews with open-ended questions to obtain detailed information.

The emergent themes were unsustainable human and mining activities, enforcement challenges, recommended implementation strategies, the need for environmental sustainability, the lack of corporate social responsibility, technological

problems, as well as involvement and creating awareness. The pursuit for profit maximization by the mining organizational leaders contribute to the lack of modern technology, lack of corporate social responsibility and other unsustainable practices as the goal is to reduce costs and maximize profits. The limited resources, inadequate government support and corruption by some officials lead to poor enforcement of the environmental laws and regulations.

The research recommendations include more community involvement in addressing environmental issues, raising awareness, government support, enforcement of the laws, adoption of corporate responsibility practices, and investing in new technology. Collaboration by the different stakeholder groups to more effectively address environmental problems and augment environmental sustainability is also imperative. The potential implications for positive social change include providing guidance for the environmental protection agency, mining organizational leaders, the government, and other stakeholders to alleviate environmental problems associated with mining operations and improve the well-being of the people and the environment.

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# Appendix A: Original Interview Questions

1. How would you define environmental sustainability?
2. How would you describe the environmental issues in your area?
3. What is your perception of environmental laws and regulations in Zambia?
4. How can you assist in influencing the implementation of environmental sustainability practices?
5. What are your views regarding the commitment of mining organizational leaders in reducing environmental problems?
6. How important do you consider yourself in influencing the environmental sustainability practices of mining companies?
7. Describe your involvement in influencing decisions that promote environmental sustainability or reduces environmental problems.
8. What practices must mining organizational leaders implement to reduce environmental problems?

## Appendix B: Invitation to Participate in a Field Test

Dear Dr. ...

My name is Helen Mbewe, and I am currently working on the methodology section my dissertation proposal at Walden University. I am conducting a field test and was wondering if you would be willing to participate as I need your assistance and expertise in aligning the research method to the interview questions. Your input would enable me to make the necessary revision and improve the quality of my work.

Attached is the problem statement, purpose statement, research question, and interview questions. If you require additional information, I could email you the whole proposal. I would appreciate if you could provide feedback by the end of next week to help me generate an acceptable dissertation proposal.

Yours Sincerely,

Helen Mbewe

## Appendix C: Revised Interview Questions Following Research Experts' Feedback

1. Briefly tell me about some of the environmental problems that you encounter in your community?
2. What are the main causes of these problems?
3. How would you define environmental sustainability?
4. What is your perception of environmental laws and regulations in Zambia?
5. What are your views regarding the commitment of mining organizational leaders in reducing environmental problems?
6. Describe your involvement in influencing decisions that promote environmental sustainability or reduces environmental problems.
7. What practices must mining organizational leaders and other stakeholders implement to reduce environmental problems?

# Appendix D: Interview Protocol

Location of Interview: _____

Date of Interview: _____

Start Time: _____

Finish Time: _____

Hi, Thank you for agreeing to be part of the study. The interview will take about 60 minutes. I will be asking you questions relating to the influence of stakeholders in implementing environmental policies in the mining industry to promote environmental sustainability. The purpose of this interview is to gain more understanding of your influence in promoting environmental sustainability. Do I have your permission to tape-record the interview for me to get an inclusive record of your responses? The interview will also involve note taking as you respond to the questions. Are there any questions or clarifications you would like me to make before we begin? You may stop the interview at any time based on the consent agreement you signed. Are you ready to begin?

Research Question: How do stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability in Zambia?

**Interview Questions**

1. Briefly tell me about some of the environmental problems that you encounter in your community?
2. What are the main causes of these problems?
3. How would you define environmental sustainability?
4. What is your perception of environmental laws and regulations in Zambia?

5. What are your views regarding the commitment of mining organizational leaders in reducing environmental problems?
6. Describe your involvement in influencing decisions that promote environmental sustainability or reduces environmental problems.
7. What practices must mining organizational leaders and other stakeholders implement to reduce environmental problems?

Thanks again for your participation in this study.

## Appendix E: Email Sent to Potential Research Participants

I am a doctoral student at Walden University inviting you to participate in my research about exploring stakeholder influence in promoting environmental sustainability in the mining industry. The purpose of the study is to gain more understanding concerning how stakeholders influence the implementation of environmental policies and mining operations to promote environmental sustainability in Zambia. I believe that your organization and its members could facilitate the acquisition of the required information relating to the research topic. I am thus seeking individuals to interview to learn more about stakeholder involvement.

The study is essential as the research findings might reveal how different stakeholder groups could work collaboratively to promote environmental sustainability. Moreover, the research outcome may add to the existing body of literature concerning how organizational leaders might effectively manage the relationships with the different stakeholders. Lastly, the study has potential implications for effecting positive social change in the lives of individuals and the local communities through the application of the research findings.

If you are interesting in taking part in the study or need more information, you can reply to this email.

Thanking you in anticipation and looking forward to hearing from you.

Helen Mbewe

## Appendix F: Flyer Used to Solicit Potential Local Community Participants

I am a doctoral student at Walden University inviting you to participate in my research about exploring stakeholder influence in promoting environmental sustainability in the mining industry. The purpose of the study is to gain more understanding concerning how stakeholders influence the implementation of environmental policies in the mining industry to promote environmental sustainability in Zambia. I am looking for volunteers to interview to obtain the required information for the study. The individuals interested in participating should be 18 years old and above, and be local residents of the mining town.

There is no compensation or payment for taking part in the study. This study is essential as valuable information might be generated regarding how different stakeholder groups could work collaboratively to promote environmental sustainability. Individuals and the local community may thus benefit from the research findings in determining ways of minimizing environmental problems or promoting environmental sustainability. If you are interested in taking part in the study or need more information, you may contact me on XXX or XXX

Helen Mbewe

Walden University