

Midlands State University

Established 2000

Our Hands, Our Minds, Our Destiny

FACULTY OF ARTS

DEPARTMENT OF DEVELOPMENT STUDIES

**AN EVALUATION OF THE EFFECTIVENESS OF DISASTER
MANAGEMENT PRACTICES IN INDUSTRIES : THE CASE OF
ZIMASCO Pvt Ltd COMPANY IN KWEKWE.**

PREPARED BY

RUFARO CHANENGETA

R112170A

SUPERVISOR MR C.D HAhLANI.

**A dissertation submitted in partial fulfillment of the requirements for the
Bachelor of Arts Honours Degree in Development Studies.**

MIDLANDS STATE UNIVERSITY



DEPARTMENT OF DEVELOPMENT STUDIES

APPROVAL FORM

The undersigned certify that they have supervised and recommend to the Midlands State University for acceptance a research dissertation entitled **AN EVALUATION OF THE EFFECTIVENESS OF DISASTER MANAGEMENT PRACTICES IN INDUSTRIES: THE CASE OF KWEKWE ZIMASCO PRIVATE LIMITED COMPANY** submitted by **Rufaro Chanengeta** in partial fulfillment of the requirements of the Bachelor of Arts in Development Studies Honours Degree.

Student's signature..... Date.....

Supervisor's signature..... Date.....

Chairperson's signature.....Date.....

Signature of the Examiner(s).....Date.....

DECLARATION

I, Rufaro Chanengeta declare that this research is my own work and I affirm that it has not been submitted to any university or institution in fulfillment of any qualification.

Student Signature..... Date.....

DEDICATION

This is dedicated to my two lovely brothers Kudakwashe and Tonderai Chanengeta who made me who I am today.

ACKNOWLEDGEMENTS

This is where the lord has made me reach so far. I am greatly humbled by what the Lord God Almighty has made me through his grace and mercy ,for his mercy and grace has kept me looking high above all things strengthening, me to make the impossible possible.

I also want to acknowledge and appreciate the efforts of the Chanengeta family, my two fathers Tonderai and Kudakwashe, who continued to believe and trust in my efforts and who saw great potential in me even when I was shocked in the mud. My deepest appreciation goes to my beloved mother Mrs P Thandiwe who supported me even in times of hardships. Lastly my sincere thanks also goes to Nellia and Remigio Chanengeta who made me feel proud and gave me the reason to attain this degree. Also my warmest gratitude goes to my friends Nyasha Mhonyera, Malvin Maphosa and Joel Gono who supported me in all my hardships.

I would like to recognize the Midlands State University (MSU) and in particular the Department of Development Studies staff who has worked very hard in equipping me with the basic concepts and knowledge I have put to use during the attainment of my degree. I wish to express my sincere appreciation to my supervisor Mr. C.D Hahlani for his brilliant guidance and unwavering support during the course of this research.

Many more deserve my thanks, even though I have not mentioned them here, in my heart I hold close everyone who has been with me during this period. I will always carry this as a beautiful memory because you all made it possible.

Abstract.

The study aimed at analyzing the effectiveness of disaster management practices in industries with specific reference to Zimasco Pvt Limited Company. The researcher used qualitative design and used questioners, FGD, interviews and observations as primary methods of collecting data. The study was drawn out of a sample size of 55 respondents and these were able to provide adequate information for the smooth ongoing of the study. This clearly demonstrated how Zimasco Pvt Limited Company has tried its level best to implement disaster management practices such as the prevention and preparedness training offered by the company. However there are times when the disaster management policies are not entirely put into practice .The company has also faced a vast number of challenges in trying to implement disaster management. These include lack of funds, lack of resources, heavy taxation by the government and lack of cooperation of the general workers. However recommendations have been brought forward by the scholar such as removal of tools and machines below standard, implementation of pre training to all workers without discrimination and reporting all hazards that might cause disasters so as to enhance the practicability of disaster management policies which paves way to development.

List of Acronomy

| | |
|--------|--|
| SHE | Safety Health and Environmental Board. |
| PPE | Proper Protective Clothing. |
| FGD | Focus Group Discussions. |
| CBD | Central Business District. |
| FEMA | Federal Emergency Management Agency. |
| UNISDR | United Nation International Strategy for Disaster Reduction. |
| UNWC | United Nation World Commission. |
| CPU | Civil Protection Unit. |
| SADC | Southern African Development Committee. |

Table of Contents

| | |
|-----------------------|-----|
| Approval Form..... | i |
| Declaration Form..... | ii |
| Dedication Form..... | iii |
| Acknowledgment..... | iv |
| Abstract..... | v |
| List of Acronomy..... | vi |

Introductory Chapter

| | |
|--------------------------------|----|
| Introduction..... | 1 |
| Background to the Study..... | 2 |
| Problem Statement..... | 2 |
| Aim..... | 3 |
| Objectives..... | 3 |
| Research Questions..... | 3 |
| Delimitation of the Study..... | 3 |
| Significance of the Study..... | 4 |
| Literature Review..... | 4 |
| Conceptual Framework..... | 6 |
| Concept of Analysis..... | 9 |
| Research Methodology..... | 10 |
| Research Paradigm..... | 10 |

| | |
|----------------------------|----|
| Sampling Technique..... | 11 |
| Data Collection Tools..... | 12 |
| Study Population..... | 13 |

Chapter 1: The legislative framework of Zimbabwe on disaster management

| | |
|--|----|
| 1.0 Introduction..... | 15 |
| 1.1 An Overview of Disaster Management..... | 15 |
| 1.2 Zimbabwe legislative Framework on Disaster Management..... | 17 |
| 1.3 Weaknesses of the Legislative Framework..... | 20 |

Chapter 2: Analysis of disaster management practices in Zimasco Pvt limited

| | |
|--|----|
| 2.1 Introduction..... | 22 |
| 2.2 The Implementation of Disaster Management in Zimasco Pvt Limited..... | 23 |
| 2.3 Zimasco Emergency Plan on how to Respond to Any Emergency Situation..... | 27 |
| 2.4 The effects of Disaster Management Policies in Zimasco Pvt Limited..... | 28 |
| 2.5 How Zimasco Operations are Affecting Health and Environment of the Local Communities of Zimasco Pvt Limited Company..... | 30 |

Chapter 3: Challenges faced by Zimasco in trying to implement disaster management policies into practice

| | |
|---|----|
| 3.0 Introduction..... | 34 |
| 3.1 Challenges Faced by Zimasco in Implementing Disaster Management Policies into Practice..... | 35 |
| 3.2 Efforts of the Government towards Lessening the Impact of Disasters in Zimasco Pvt Limited..... | 39 |

Conclusions

4.0 Introduction.....41

4.1 Summary of the Study.....41

4.2 Conclusions42

4.3 Recommendations for the Effective Disaster Management Practices in Zimasco Pvt Limited Company.....43

4.4 Conclusion.....48

4.5 Reference List.....49

4.6 Questionnaire.....52

Introduction

Maine Emergency Management (2007) defines disasters management as a process or strategy that is implemented before, during or after any type of catastrophic event takes place. This process is usually initiated whenever anything threatens to disrupt normal operations, or put people's lives at risk. Most of the companies in Africa have formulated their own disaster management mechanisms that make it possible to overcome various catastrophes and return to functioning normally, as quickly as possible. According to the Conjecture Cooperation Policy of 2003- 2014 there are four essential stages which are of paramount importance in disaster management, and these stages has to be followed so as to have an effective disaster management practices. These consist of the prevention or mitigation, preparedness, relief and recovery or reconstruction. However one would do an injustice by not analysing; to what extent the disaster management practices are being implemented on the ground and how effectively. In some companies, they are not given a priority due to various shortcomings.

Taking a thorough analysis of the practices of Zimasco Pvt Limited Company Kwekwe Division, the student has identified some of the disaster management mechanisms implemented by the company which are effective, though to a limited degree. On structural and non-structural measures the company has put forward, disaster management practices. These include fire preincident training and testing centre; formulation of the health department with professional doctors; creation of fire assembly points; issuing of fire resistant work suits and helmets which are compulsory to every worker; the use of siren and ambulance specifically designed and reserved for fire purposes and the training of workers on how to react to fire and the first aid kits available.

According to the report of the Safety Officer of Zimasco Pvt Limited Company, the company has been trying its level best to implement disaster management practices. However, due to some challenges and shortfalls, it has been difficult to give disaster management practices a priority. Thus to a certain degree some practices or mechanisms are not effective due to various reasons.

Background to the study

According to Martinussen (1997) industrialization paves way to development and it determines a country's actual development. Therefore the need to manage disaster is very important so that development may continue to take place in industries. Most industrial companies have failed to implement disaster management practices effectively, thus resulting in the occurrence of many disasters in industries. Taking for example in India, 1984 there occurred an industrial disaster known as the Bhopal disaster where by the Union Carbide India pesticide plant leaked gaseous chemicals into the atmosphere affecting residents and ecosystem in the location around the industry. There was damage and contamination which led to the death of people who resided near the industry. Such mismanagement may highlight the ineffectiveness of industries in mitigating and managing disasters. Also in 2010 disaster occurred in the Gulf of Mexico which shows the ineffective disaster management practices in industries. More so in Nigeria expatriate companies have been extracting oil while pumping toxins into rivers which has been killing people, animals and plants, thus destroying prospects for African development. Looking at Kwekwe Zimasco Pvt Limited Company, many incidents have occurred which highlight the lack of disaster management practices .On the 26th of June there occurred a disaster whereby there was an electric explosion and eight people were seriously injured. Also in 2009, furnaces in Zimasco exploded which resulted in the death of five workers and some were seriously injured. All being said, new disaster management policies were implemented such as the pre incident training and testing practice, how to use fire extinguishers etc. However the question may arise that, are the measures and mechanisms of disaster management implemented effectively or there are only theoretical policies which are not practiced.

Problem statement

The effectiveness of disaster management plans and policies are easier said than done. Therefore since Zimbabwe is prone to industrial disaster, it is of great benefit for the country to analyze and monitor the effectiveness of disaster management practices in industries. Many industrial companies have failed to implement disaster management policies thus resulting in underdevelopment through the failure of implementing polices effectively. Hence with a focus

on Zimasco, this dissertation seeks to examine the extent to which the company implemented disaster management policies and effectiveness of policies.

Aim

The aim of the study was to assess the effectiveness of disaster management practices in industries.

Objectives

- ❖ To evaluate legislative framework governing disaster management practices in industries.
- ❖ To assess organizational disaster management policies and practices employed by Zimasco Pvt Limited Company.
- ❖ To outline the challenges or limitations to disaster management in Zimasco and explore the alternatives to the challenges limiting disaster management practices in Zimasco.

Research Questions

- ❖ To what extent is Zimbabwe Legislative Framework on Disaster Management feasible?
- ❖ What are the Disaster Management policies and practices employed by Zimasco Pvt Limited Company in Zimbabwe?
- ❖ What are the challenges facing Disaster Management in Zimasco, how best can these challenges be solved?

Delimitation of study

Kwekwe Zimasco Pvt limited Company is located in the Midlands Province in Kwekwe and it is located 10km away from the C.B.D of Kwekwe town. Zimasco is specifically stationed in ward 2Mbizo section. The scholar's focus group in this research will mostly be the general workers and the people who reside close to the industry since they are the ones who can provide reliable evidence or information of what is happening within the company area. Also the focus group may also consist of healthy and environmental safety managers of the industry as they are the initiators of disaster management programs.

Significance of the study

The research was beneficiary especially to the workers of Zimasco Pvt Limited Company, as it was able to highlight the negative and positive impacts in disaster management. This research was of paramount importance as it made workers realize the importance of disaster management and making it a priority. According to Jasvir (2012), the level of industrial development of a country becomes the yardstick or measurement to judge its actual development. Therefore the more disaster management practices are effective the higher the rate at which development may take place. So the research was able to enlighten people on the benefits of exercising disaster management practices which automatically improve development prospects.

Literature Review

Under this section the researcher focused on various scholars' perspective on the aspect of disaster management and its practices, how effective they are. According to Baffon (2003) disaster is a disruption of the normal functioning of a community, humans, materials, economic, environmental and industrial losses. Wilsner, Ben and Blarke (2004) postulates that disaster management is the discipline of dealing and avoiding risk, a discipline that involves preparing for a disaster before it occurs.

According to Barton (1969) "disaster by their very nature are uncalled for and they occur when people least expect them, thereby causing untold suffering to humans which paves way to underdevelopment. However, since scholars acknowledge that the impacts brought forward by a disaster are devastating it becomes crystal clear that there is need for the implementation of disaster management practices. Taking for example, the industrial disaster known as the Bhopal Disaster of 1984 occurred due to lack of disaster management practices of controlling the pesticide was dumped near the industry. Such a disaster may highlight the importance of taking into consideration disaster management practices.

Alexander (2002) concurs with Barton when he said disasters attack by surprise although in some cases early warning systems may be developed. However, the fact that disasters may occur even if early warning systems are implemented may show that early warning systems cannot work on their own. For mitigatory measures, there is need for other plans, strategies and

mechanisms which compliment early warning systems so that there is created an effective disaster management practice.

DISASTER MANAGENT CYCLE



According to Cunny (1983) the above disaster management cycle has been in use for a long time and has proven to be useful, therefore it would be of great advantage for Kwekwe Zimasco Pvt Limited Company to take these stages into practice so as to come up with an effective disaster management. However, the disaster management cycle invented by Cunny has some shortcomings in the sense that the first two stages which are prevention and preparedness are the most important, for the last two stages which are response and recovery are undertaken when a disaster occur of which the most important thing is to prevent the disasters from occurring. Also the disaster management cycle is mostly applicable in Europe for African companies do not have adequate resources to implement these stages. This is supported by Buffon (2003) who says that once disaster management is practiced then development is neglected, of which both should be at core existence.

Different scholars has brought forward various ideas to use so as to make disaster management practice effective, but all these ideas have shortcoming so there is need to compliment all ideas so as to come up with the effective disaster management practices.

Conceptual framework

Disaster

According to Quarantelli (1998) a disaster is a serious disruption of the functioning of the community or a society involving wide spread human, materials, economic or environmental losses and impacts, which exceed the ability of the affected community or society to cope using its own sources. The business dictionary of Oxford defines disaster as a calamitous, distressing or ruinous effects of a disastrous event such as drought ,flood fire ,hurricane ,war for they disrupt critical functions of an organization, society or system ,for a period long enough to significantly harm it or cause its failure. Fredrick C. Cunny (1994) the U.S disaster relief specialist, defines disaster as a situation resulting from environmental phenomenon that produced stress, personal injury, physical damage and economic disruption of great magnitude. The (F.E.M.A) federal Management Agency describes disaster as an occurrence of natural catastrophe, technological accident or human caused event that has resulted in severe property damage, deaths or multiple injuries According to the <http://www.odpem.org.jm> also views disaster as any event, natural or man caused which creates an intense negative impact on people ,goods and services or the

environment and exceeds the affected community's internal capability to respond, prompting the need to seek outside assistance .

There are four types of disasters namely natural disaster, environmental emergencies, complex emergencies and pandemic emergencies. Among the above mentioned, the researcher focused on the environmental emergencies. The Red Cross and the Red Crescent Societies elaborate this type of disaster as one which includes industrial and technological accidents and usually involves production of hazardous material and occur when these materials are used, manufactured or transported.

Disaster Management

Disaster management can be defined as measures, activities or actions implemented so as to reduce the impact of a disaster. According to Richardson (2005) disaster management is the discipline of dealing with and avoiding both natural and man-made disasters involving preparedness, response and recovery in order to lessen the impact of disasters. The http://www.ifrc.org/en/what_wed/disaster-management/abtdisaster_m/ also views disaster management as the organization and management of resources and responsibilities for dealing with humanitarian aspects of emergencies in particular mitigation, response, relief and rehabilitation in order to lessen the impact.

Industry

Industry is the production of goods and services within an economy. Charles M (2000) postulates that industries can be classified in a variety of ways at the top hierarchy is the primary sector, followed by the secondary sector and lastly the tertiary sector. Primary sector involves extraction of raw materials from the earth directly, for instance, farming or mining. Secondary sector includes the processing of products from primary industries these include metal, furniture production or the smelting of iron. Tertiary involves the delivery and services of finished goods.

Disaster Management Cycle



The disaster management cycle explains the ongoing process by which industries businesses and governments and civil society plan may try to mitigate the impact of a disaster. All the steps in the cycle may lead to greater preparedness, reduced vulnerability and hazards and also the rate at which disasters are prevented. The whole cycles if implemented it shapes plans and policies that modify or mitigate the effects on infrastructure, community and property. Disaster management cycle is categorized into four main stages which are mitigation, preparedness, response and recovery. Under the first stage of mitigation so many activities, actions are done so as to decrease the likelihood or chance that an emergency take place. Actions such as scientific hazard analysis, vulnerability analysis, structural and nonstructural measures, awareness campaigns, training and capacity building. According to the United Nation International Strategy for Disaster Reduction

(UNISDR) the adverse impacts of hazards often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions. All the measures implemented at this step are to prevent natural or man induced events from occurring which may result in disasters. After mitigation comes the preparedness stage where by policies, emergency operation, training, planning and coordination exercises are done to lessen the potential crises. Also under this category activities are geared towards minimizing the impacts of a disaster, therefore various related agencies may join hands at this stage to try and prepare to respond such as creation of fire assembly points teaching on how to evacuate from a building etc.

At stage three this is where people respond to a disaster, for actions are taken to effectively contain and resolve the crisis of emergency. According to Vancouver (2013), actions carried out in a disaster situation are mainly to save live, alleviate suffering and reduce economic losses. Taking for example in the case of a fire disaster the use of fire extinguishers and fire brigades are the response actions. The last stage is known as the recovery or rehabilitation stage. This is where by people adjust to their normal, restoring operational activities and also at this stage measures to mitigate disasters may be employed. Also under recovery there is the repair of economic, physical and economic damage. Taking for instance if it was a war type of disaster at this stage that's were reunification would be done creation of refugee camps for the displaced and provision of humanitarian aid to the people.

Concept of Analysis

The researcher used Sustainable Development concept to support the thesis. According to the Brundtland Commission (1987) as reported on United Nation World Commission on Environment and Development defines sustainable development as development that meets the needs of the present without compromising the ability of the future generation. Whereas disaster management is defined as a process or strategy that is implemented before, during and after any type of catastrophic take place (Maine Emergency Management, 2007). The fact that sustainable developments are plans to secure resources for future generation makes disaster management and sustainable development intertwined. Sustainable approach clearly highlights sustainable development as a roadmap, plan or activity that uses resources and where immediate and intergenerational replication is needed. In most cases when disaster management practice are

effective there is sustainable development, in the sense that the more one practices disaster management practices the more sustainable development is at its greatest height. Taking for instance in Hwange in 1974 there occurred a disaster in Hwange mines which caused damage to property and people were injured, such an action may clearly show the result of the absence of disaster management which promotes underdevelopment. Looking at Zimasco Pvt Limited Company, if it implements disaster management there would be sustainable development since all disasters would be mitigated. Martinussen (1997) postulates that industrialization is central to development, which means that there is need to implement disaster management practices so as to come out with sustainable industrial development.

Research Methodology

It is the system of collecting data for research project; the data may be collected either theoretical or practical. Bryman (1999) simply defines Methodology as a guideline system for solving a problem, with specific components such as phases, tasks, methods, techniques and tools. The researcher used qualitative method to gather data for the study so as to produce a well in-depth research. The method that was used brought out the strengths and weakness of the research paradigm so as to give vivid and validity research findings.

Research paradigm

Webster Dictionary defines a paradigm as "an example or pattern: small, self-contained, simplified examples that we use to illustrate procedures, processes, and theoretical points." The most quoted definition of paradigm is Thomas Kuhn's (1962, 1970) concept in *The Nature of Science Revolution*, i.e. paradigm as the underlying assumptions and intellectual structure upon which research and development in a field of inquiry is based. In this research, qualitative research paradigm was employed. With qualitative research the scholar was able to attain information on statistics, narration of events, descriptive analysis and past events narrations which quantitative data analysis do not offer. According to Pope (2006) qualitative research encompasses a range of philosophies research designs and specific technique including in-depth good use of qualitative research since it is accurate, reliable and provide clear information.

Sampling Techniques

Kara (2012) postulates that sampling is a process of selecting units e.g. people, organizations from a population of interest so that by studying the sample the researcher fairly attained results back to the population from which they were chosen. Callanam (2002) also contends that a sample is a finite part of a statistical population whose properties are studied to gain information about the whole. When one is dealing with people it can be defined as a set of respondents selected from a larger population for the purposes of a survey.

a) Purposive Sampling

The researcher used purposive sampling technique to gather information from the respondents. Purposive sampling represents a group of different non probability sampling techniques and its goal is not to randomly select units in a population to create a sample with the intention of making generalization, but it focuses on particular characteristics which are of interest and enabled the researcher to answer questions. Bernard (2002) asserts that with purposive sampling the researcher decides what need to be known and finds people who are willing to provide information by virtue of knowledge and experience. The scholar used purposive sampling because it reached the targeted population quickly and it was cheap and reliable thus making the ongoing project much easier.

b) Convenience Sampling

According to Denzin (2000), convenience sampling is simply one where the units are selected for inclusions in the sample are the easiest to access. Convenience sampling is very easy to carry out with few rules governing how samples should be collected. The scholar used this technique as the relative cost and time required to carry out a convenience sample are small in comparison to probability sampling technique. Convenience technique also allowed the student to gather information from a selected group of people such as common workers who were the most affected when disaster strike. Purposive and convenience sampling techniques are interlinked in the sense that they complement each other. General workers and health safety officers were a sample size that was convenient to the researcher as well as purposive, since it was able to attain data from character of interest.

Data Collection tools

Hoffman (2003).defines data collection tools as instruments that are used to mine or collect the required data to solve a research problem. In this research the tools that were used to gather pertinent information were interviews, questioners, observations and focus group discussions.

a) Interviews

The scholar used interviews to obtain information from the respondents. An interview can be defined as a way of collecting data from respondents through one on one interaction or it could be done with more than two people, but the main agenda of the interview would be to collect data from respondents. With interviews it was easy to obtain data relevant to the study, as they allowed the researcher to ask many questions as possible which the informants responded to. The use of interviews was cheap, faster and easy way of collecting data. The scholar took use of interviews because they allowed the interviewer to clarify quests, allowed informants to respond in any manner, allowed interviewer to observe verbal and non-verbal cues which clarified relevant information from the respondents. However interviews had their shortcomings such as unstructured interviews often yield data too difficult to summarize or evaluate though such weaknesses were complimented by other tools.

.b) Focus Group Discussions

The scholar used FGD as it is a rapid assessment, semi structural data gathering in which a purposively selected set of participants gather to discuss issues and concerns based on a list of key themes drawn up by a researcher Robinson (1993). FGD were used by the researcher because it provided a fast way to learn from a targeted group of people and also made the researcher receive information easily. Therefore the researcher conducted FDG's with workers and members of the executive safety board and the local community people.

c) Questionnaires

According to Savin-Baden and Major (2013).a questionnaire is a means of eliciting the feeling belief, experiences, perception or attitude of some sample of individuals. The questionnaire is most frequently reliable preplanned set of questions designed to attain specific information about a pertinent topic. The scholar used questionnaires since it reduced expense and time and also

yields more data comparable to interviews because it was a question and answer segment. However challenges arose such as the response of the respondent was biased thus affecting the progress of the research, though this was complimented by other tools.

d) Observations

The researcher used participant observation. It was possible for the researcher to observe behavior without depending on self-reporting. According to Ader and Mellenbergh 2008), the accidents of behavior and attitude being document or the accidents of artifact of past behavior being preserved to be studied in the future .The scholar used observation so as to gain information and understanding of the complete context through observing, though this tool was time consuming and disturbed report between the researcher and the respondents

e) Secondary Data

The researcher used secondary data to collect information needed for the ongoing of the project. Secondary Data can be defined as data that has been collected by other scholars and is readily available (study guide). The scholar used various sources such as Journals, Newspapers, Books and Internet.

Study Population

Suvillian (2005) says that all research questions address issues that are of great relevance to important groups of individuals known as a research population. A population is a group of individuals, persons, objects or items from which samples are taken for measurement. There are two types of population in research, namely target population and accessible population .Target population refers to the entire group of individuals or objects to which the researcher was interested in generalizing the conclusions. Accessible population is in which the researcher applied their own conclusions. In this research the study population referred to all workers at Kwekwe Zimasco Pvt Limited Company who were affected by disasters in case of an accident in the fire prone industry. Zimasco Steel is located in the Midlands Province in Kwekwe ward 2. The study population was comprised of general workers, healthy and environmental safety officers and members of the community. The following table shows the population of the study:

Population frame and size

| Target population | Size |
|---|-------------|
| General workers | 30 |
| Healthy and Environmental Safety Officers | 5 |
| Members of the Community | 20 |
| Total | 55 |

Chapter 1: Legislative Framework on Disaster Management in Zimbabwe

1.0 Introduction

The effectiveness of disaster management can be measured by the practicability of policies implemented within an organization or even a country as a whole. In most countries disaster management has not been prioritized, thus this has resulted in many countries suffering from losses hence paving way to underdevelopment. The more a country or an organization fails to effectively abide to its principalities or policies in a practical way; the particular country becomes vulnerable to various disasters. The implementation of disaster management practices is way cheaper than then the rehabilitation process or the way in which a country may recover from a disaster, which requires more funding, thus resulting mostly in the diversion of funds from development to the recovery and rehabilitation process. Disaster management works hand and glove with development ,for once a country is well vested in disaster management practices this automatically means development of that particular country may thrives to its greatest heights as all potential hazards would have been mitigated against. However due economic instability and lack of adequate funds in the African continent it has become so difficult to implement disaster management practices since the practices require more funds. Various states have tried their level best to introduce legislative framework which focuses mostly on disasters so as to improve their disaster management and the framework is mainly drafted to guide against disasters and lessen its impact in case it occurs. This chapter is mainly focusing on the general overview of disaster management and the legislative framework put forward by Zimbabwe to mitigate, prevent and prepare for disasters.

1.1 An Over view of Disaster Management

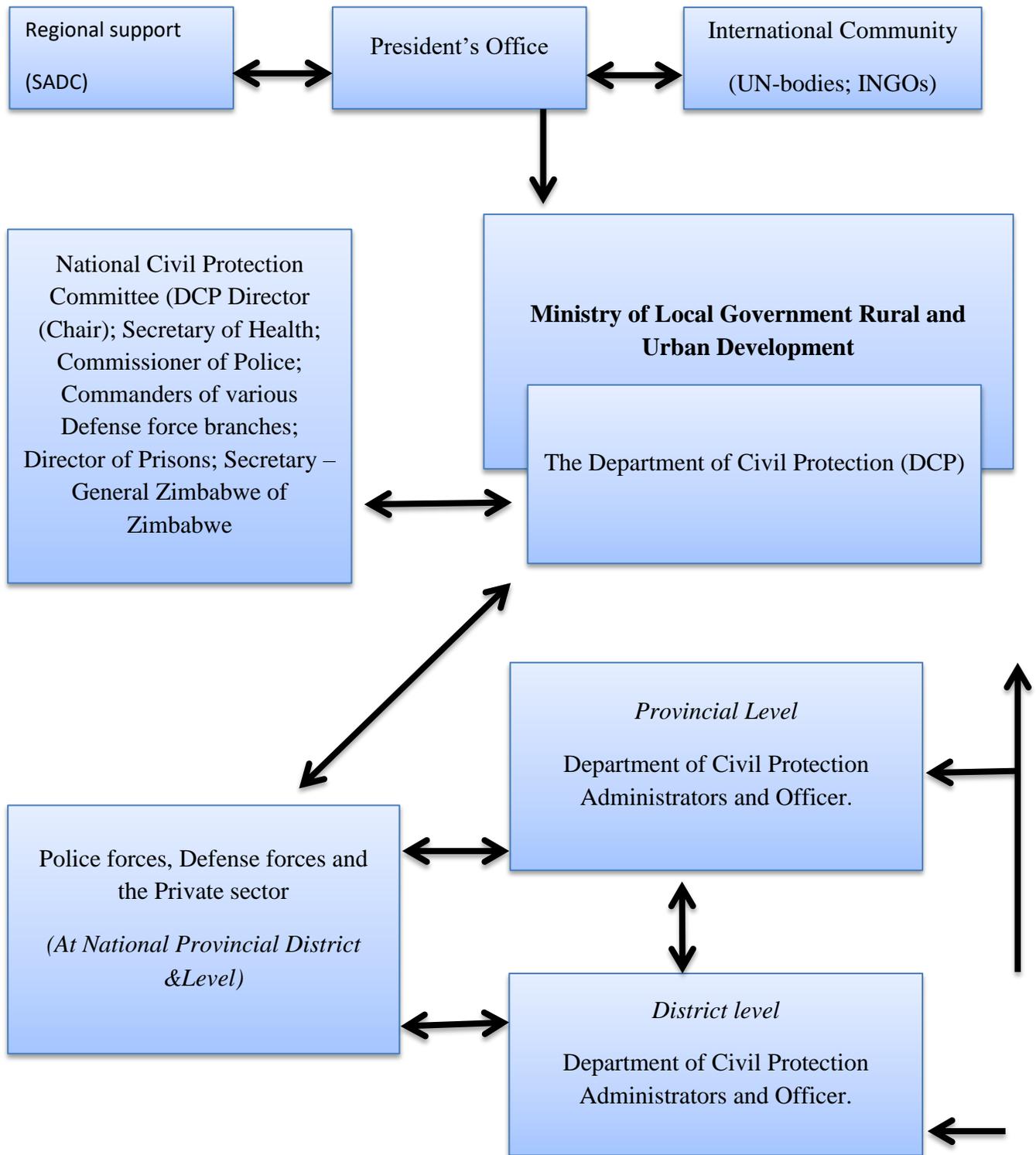
According to Barton (1969), “disasters by their very nature are uncalled for and strike when people least expect them there by causing untold sufferings to humans and the destruction of industries”. The fact that disasters occur unknowingly may highlight how disaster management is of paramount importance in industries. In the day today disaster management in various countries is determined with disasters which would have occurred at different places. In Africa and Europe most industries have formulated their policies to guide against disasters but these have seem to be less effective due to the high rate of the occurrence of disasters. Taking for

example U.C.L. pesticide company in India faced an industrial disaster in 1984 known as the Bhopal Disaster which led to the closing of the company for good, also in Zimbabwe 2005 there occurred an explosion of chemicals at Sable Chemical which resulted in death of many workers within the company and in Nigeria Niger Delta there occurred an industrial disaster in 2013 where by toxins were pumped into rivers which affected the ecosystem and also resulted in the death of animals and humans. All these scenarios or incidents demonstrate the level of the effectiveness of disaster management practices in various industries in Africa and Europe.

Apart from industrial disasters other disasters such as cyclones, earthquakes and tsunami disasters have been occurring annually in the world thus causing underdevelopment as the rehabilitation funds used for recovery are diverted from various sectors to recover from disasters. According to Cred (2010) more than 400 disasters take place worldwide every year, affecting more than 230 million people and causing an average of almost 75 000 death annually. Taking for instance in Bangladesh in 1998 there occurred floods which resulted in the destruction of property and death of children; however the government of Bangladesh's safety and preparedness is still in the form of choice not as mandatory requirements. As in the case of Indian Ocean a tsunami destroyed 750 schools in Indonesia and children were displaced. However the government later used 2, 8 billion for rehabilitation. Also in Algeria 753 buildings collapsed due to cyclones and 79 billion was used for recovery. Therefore the fact that disasters occur annually, governments should give disaster management a mandatory so as to mitigate for disasters and avoid the diversion of funds which leads to underdevelopment.

In Zimbabwe disasters have been occurring in various regions to the extent that Zimbabwe implemented policies which had to dwell with the situation by the formation of the Civil Protection Unit, which has formulated acts to guide against disasters in Zimbabwe. Alexandra (2002) say that governments should be well prepared and be adequately resourced so that when a disaster strike they can respond in an effective and efficient way, which means the state of Zimbabwe has to be by all means prepared to mitigate and respond to disasters in case of any emergency. The non-governmental organization such as United Nations, UNESCO and UNEP emphasis on the importance of safety by stating that Disaster Management should be part of a nation long term planning Cred (2010) thus postulating the degree at which disaster management policies and practices should be a major objective in a country.

1.2 Zimbabwe's Legislative Framework on Industrial Disaster Management



Source adopted for Chikoto and Sadiq (2012)

Figure 1 The structure of Zimbabwe's Disaster Management Policy Framework

Zimbabwe has formulated its policies so as to mitigate against disasters. The above diagram illustrates the structure of Zimbabwe's legislative framework hierarchy. The department of Civil Protection Administrators and Officers are appointed at District and Provincial level and these committees are offered training by the Civil Protection Unit and they work under the ministry of Local Government Rural and Urban Development, which is also under the Civil Protection Unit. On the far top of the hierarchy is the President who has overall judgment when a disaster strikes. It is in the hands of the president to seek assistance from International Organizations such as SADC.

Legislative framework in the concept of disasters can be defined as policies implemented by the government so as to reduce or mitigate the impact of disasters within a state. Due to increasing frequency and intensity of disasters, Zimbabwe saw the need of introducing legislative framework to lessen the impact of disasters thus paving way to development. According to Benson and Clay (1998) shows how disasters cause distortion in national budget moving away from capital expenditure towards relief and rehabilitation. Because more funds are diverted to recovery and rehabilitation it is of paramount importance for a nation to improve its disaster risk reduction thus avoiding underdevelopment. Since 1980 when Zimbabwe got its independence, disaster management was referred to as civil defense since it was designed through the war liberation by this time it only gave privileges to the white minority group. The concept of disaster management was modified and developed from civil defense to civil protection and now has transformed into disaster risk reduction which led to the enactment of Civil Protection Act 5 of 1989. According to Chikoto(2012) following independence of 1980 the government of Zimbabwe implemented supporting legislation to establish a sophisticated national emergency management specified in the Civil Protection Act of 1989 in case of any emergency ,the agency would set aside funds to cater for the problem but if the funds are exhausted then it becomes the duty of the president to declare national disaster and funds will be attained from the International funders.

The first piece of legislation that was passed was the 1982 Civil Defense Act where by civil protection was defined as any services provided or measure taken for the purpose of preparing for, guarding against, and dealing with any actual or potential disaster. In 2001 the definition was amended for the means of the country. Also the legislation resulted in the creation of

departments of Civil Protection. This department currently is under the Ministry of Local Government Public Works and National Housing, as the implementing body of the national government initiated disaster preparedness and mitigation programmes Chikoto (2004).

According to Inter Works (1998) The Civil Protection Unit always and continues to be responsible for coordinating all national efforts based on the Civil Protection Act (2001) as its primary agenda involve the preparing, preventing and mitigating disasters once they occur.

The department also focus on training officers at all three levels of government namely National, Provincial and District. All these are expected to plan for disasters by producing operational plans for emergency preparedness and response that would be activated in the event of a disaster (1989, 2001 U.N.I.S.D.R 2005) The Civil Protection Unit appoints its own officers both at provincial and district level to intercede between the levels of government and national government. Under the Provincial the provincial Administrator chair, in District the District Administrators chair however the above mentioned administrators do not make decisions on their own for they are assisted by the board of members whose duty is to advise and give opinions to the administrators and committee Chikoto and Sadiq (2012).

Zimbabwe since 1995 has been in a process to review its legislation policies in an effort to reduce disaster risk. Under this process several of stakeholders were consulted to the extent that a Bill of consideration was drafted and presented in the parliament with vast of adjustment and formulation policy to lessen the impact of disasters such as

- ❖ Repeal of the current C.P.U and to be replaced by Emergency Preparedness and Disaster Management Cycle.
- ❖ Establishment of early warning systems for emergencies and disasters
- ❖ Standardized training for emergency services.
- ❖ Capacitating local authorities to manage emergencies and disasters at all level.
- ❖ Establishment of funding for disaster risk reduction.

Most of the applications that were brought forward in the Bill were considered and given priority for example establishing of funds for disaster risk reduction. Zimbabwe has set aside disaster management fund such as the 10% fund that is meant for the HIV/AIDS since the nation is vulnerable to such a hazard. Also the establishment of early warning systems has been put into

practice where by irrigation schemes have been introduced in Masvingo, a drought prone area and also fertilizers.

1.3 Weaknesses of the Legislative Framework on Disaster Management

However the legislative framework of Zimbabwe has some challenges it faces in a bid to lessen disaster risk. For most of the policies that were drafted by the Civil Protection Unit were policies on paper and these were never put into practical thus the legislative framework becomes non effective in reducing the vulnerability of disasters. Additionally lack of adequate funds may be one of a challenge in Zimbabwe legislative framework in disaster management, for the present state of the country's finance is devastating for it is facing a challenge to pay its civil workers therefore disaster management budget will be seen as something which is not necessary due to its financial challenges. Also the structure of the legislative framework undermines the assistance of International organization who can give aid in Zimbabwe to recover from disasters, for the need of help can only be declared by the president thus at times even if there is need for assistance the president might deny it thus leading to under development. For example in 2008 where by Zimbabwe faced a great pandemic disaster of cholera and the state denied to declare it a national disaster thus Zimbabwe was not able to quickly recover from the disaster till later on when it was given humanitarian aid by UNICEF, which shows some of the challenges of the legislative framework when trying to implement disaster management.

More so the fact that developing countries are poor in nature has also made it difficult for Zimbabwe to implement legislative framework on disaster management effectively since there are prone to disasters, contrary to the developed countries whose legislative framework is water tight and so effective thus the rate at which they are affected by disasters is to a limited degree. This has also caused underdevelopment in the sense that Zimbabwe struggles on its own till the later stage trying to respond to a disaster though it is aware that it is not capable on its own to recover from a disaster, hence causing a stop in the development sector. The Herald newspaper of 5 August 2014 in an article "formulate disaster management policy", postulated how the legislative framework on disaster management has failed to mitigate against flooding in the vulnerable low lying areas of Muzarabani, Beitbridge, Chisumbanje, Tsholotsho and Chibwe which have endured multiple disasters in the last fifteen years. This may demonstrate how Zimbabwe must raise its bar on the aspect of disaster management though capacities and

resources to do so are insufficient disaster management have to be practiced thus paving way to development at its greatest heights.

Chapter 2: Analysis of Disaster Management Practices in Zimasco Pvt Limited

2.0 Introduction

Zimasco Pvt Limited Company is an integrated ferrochrome producer based in Zimbabwe. This organization specializes on the mining of ferrochrome in places such as Shurugwi, Gunea Fowl, Lalapanzi and Mutorashanga Zimasco started operating in 1926 as an exporter of ore and in the late 1962 it began the process of smelting ore which was mainly done through the use of fire. After a year of operating the company was purchased by the Union Carbide Cooperation of United Kingdom which came up with the expansion of smelting operation between 1965 and 1975. By this time furnaces 1,2,3 and 4 were established which brought into the scene the Kwekwe West Plant. Within a short period of time the Union Carbide Cooperation decided to resign in the mining business. In 1995 the name of the company changed from Union Carbide to Zimasco Pvt Limited. In December 2007 the company was purchased by China owning 92% of the shares whereas 27% became the local share. Currently Zimasco Pvt Limited Company's largest shareholder is China dominating within the organization and the minor local shareholder with a small percentage.

As an industry which mainly focuses on the smelting of ferrochrome there are various hazards which the company is vulnerable to hence there is need for an effective disaster management practice. During its smelting production of ferrochrome electricity and fire is mainly used during the process thus making fire a major potential hazard which might cause disasters within the company. Also Zimasco can be also prone to flooding disasters which may be caused by water in the underground tunnels used during the smelting process. Apart from the above mentioned hazards Slime dams can also be a potential hazard which may cause disasters. Slime dams are dams with a combination of chemicals, slurry and mud which are the wastes produced after the smelting process is done, therefore due to density the wastes may collapse the dam walls thus resulting into a disaster as the wastes are chemicalised and can both affect the environment, the workers within the company and the local community. Therefore Zimasco has come up with policies and mechanisms to lessen the potential hazards which can cause disasters. This Chapter is going to emphasis more on the policies implemented by Zimasco, their practicability and effects and also health and environmental effects in the local communities caused by Zimasco production

2.1 The implementation of Disaster Management Policies in Zimasco Pvt Limited

Zimasco Pvt Limited has come up with policies that reduce the vulnerability of disasters within the organization. For the production of the company to move smoothly there is need for an effective disaster management policy and practice to be implemented, thus paving way to development. Most of the policies that have been implemented by Zimasco target general workers, local community, the environment and the properties of the organization. The disaster management policies are designed by the Safety Healthy and Environmental board together with NOSA whose objective is to implement disaster management so as to reduce the chances at which disasters may occur in the organization, which disrupts its production. Looking at the policies that have been implemented by Zimasco there has been implemented in an orderly manner from top to bottom. First is the Prevention and Mitigation followed by the Preparedness moving to the Response and lastly to the Recovery or Rehabilitation.

a) Prevention and Mitigation

Under prevention and mitigation Zimasco has tried its level best to prevent disasters from occurring. Through observation the scholar was able to observe how Zimasco operate in its Prevention Policies. According to the SHE supretendant the first and most prevention policy implemented is the provision of proper safety clothing which is called the PPE. The proper PPE may consists of a hard hat, safety glasses, work suit which is fire resistant, ear plugs to prevent machine noise, heat retardant leather gloves, leather mask to prevent direct heat at the face and heat resistant sprat shoes. These protective clothing are strictly compulsory and there are used to protect workers from any injuries. Through observation the scholar was able to witness the effectiveness of this policy as most of the workers were equipped with proper PPE. More so the SHE Board of directors often carries out a Hazard Identification Risk Assessment, analyzing the potential hazards which may cause disasters. Under this policy measures were implemented such as never to put fine materials in the furnace which may cause explosion and also the introduction of the rubbing process in furnaces so as to lessen the eruption chances in the furnaces.

Also under hazard assessment, hazards such as fires have been identified and these have resulted in preventive measures such as the availability of fire fighters who are always at stand by to prevent the outbreak of fire .Zimasco also bought a fire tender so as to prevent fire explosion from occurring. During the interview with the Safety Officers the Supretendant mentioned that Zimasco had bought fifty fire extinguishers from South Africa on the 1st of September 2014 so as to increase their capacity and resources to prevent disasters from striking. Additionally under mitigation policies Zimasco has also introduced the Plant and Equipment policy where by workers are advised to check the states of machines such as cranes before lifting the ferrochrome load this has been done to prevent workers from being accidentally hit by machines, this has seem to be an effective preventive measure as it has resulted in no workers being injured through using machines thus this policy has been implemented effectively in preventing disasters. Through focus group discussions some policies such as Shift talk were identified which are implemented by Zimasco. A shift talk is where by when a new shift starts the first 15 minutes is meant to update the person taking over on any challenges or problems that have been faced in the previous shift, this may equip the new shifter to be alert of the problems thus by doing so this policy have lessened the chances of disasters taking place since the 15 minutes talk may be a warning of what is to happen or what has happened thus preventing disasters from occurring.

Apart from this cyrines has also been used as a preventive measure to disasters. Zimasco has formulated various cyrines each with a different purpose .Taking for instance the bazar cyrines is a caller cyrines, the hooter for accidents, complete cyrines is for exchange of shifts and the startup cyrines is for starting machines. The use of cyrines has been an effective warning to prevent disasters especially the startup cyrines which are used when every machine is starting up therefore these may prevent disasters as whenever a machine starts up such as car charges in the electricity department this may mean that everyone will automatically move aside paving way for the machine to pass thus validating its effectiveness. Zimasco has also constructed dam walls to prevent the breeching of slimes which might be hazardous to the local community, workers and the environment. The Slime dam walls have resulted in preventing any disaster from taking place hence validating the effectiveness of the policies implemented Thus such preventive measures may result in prevention of disasters hence showing the effectiveness of the policies implemented in Zimasco Pvt Limited.

b) Preparedness

Zimasco has implemented policies where by everyone is forced to prepare himself or herself from disasters, for whenever a disaster may occur the company would have already put forward the preparedness measures to lessen the impact of disasters. First and foremost Zimasco has made sure that every worker of the company receives pre training before entering into different fields.

The company has taught every worker on what action to undertake were and how in case of a disaster. Taking for instance Zimasco has implemented the policy” Be your brother’s keeper” where by every worker is supposed to check his or her fellow colleague from time to time so that when a disaster strike workers would have adequate information on their colloquies’ where about thus showing the effectiveness of the implementation of disaster management policies. The organization has also created fire assembly points were every worker is advised to rush to in case of a disaster. This was propounded for the safety of workers when a disaster strikes so the organization has trained workers how to evacuate from the premises going straight to the fire point assembly. Under the preparedness stage Zimasco has also trained fire fighters on how to disassemble different types of fires. D, Masuku a Director of the NOSA board mentioned that in an interview, fires are triggered by various hazards therefore before a fire is disassembled it is of paramount importance to identify the cause of the fire so that fire fighters may be aware of which source is suitable to disassemble the fire. Zimasco Pvt Limited Company in its practices it has offered an effective training on fire fighters taking for instance these fighters has been taught to use foam chemicals if the fire is triggered by electricity and most importantly to stop the source of electricity before the attacking process hence showing the effectiveness of policies implemented by Zimasco.

Additionally these workers have been trained on how to use fire extinguishers, fire tenders to stop fire outbreaks which has been effective policies taken into practice by Zimasco Pvt Limited. Still under the preparedness policies implemented by Zimasco, the company has also trained fist aiders team whose duty is to offer emergency attention to the people who would have been injured in a case of a disaster. The general workers have also been trained on how to exercise first aid emergency in case of any disaster. Taking for instance workers have been

trained on how to treat fire burns in the first 10 minutes of the accident before a person is taken to the hospital thus postulating the level of the effectiveness of the policies of disaster management in Zimasco.

Zimasco has even gone a step further in the preparedness stage by purchasing ambulances specifically prepared and reserved to carry injured people in case of a disaster. Also an emergency control centre has been created whose duty is to make emergency call and assist all the workers in need of help in case of a disaster. The company has also made a preparedness measure by establishing a clinic within the premises of Zimasco, and this clinic constitutes of professional nurses and a doctor .In Shurugwi Zimasco has also established a regional hospital in Shurugwi which mainly caters for those who are seriously injured within the organization of Zimasco. Apart from this policy Zimasco has also implemented the policy of alarm alert where by workers are trained to evacuate from the building or plant if the disaster alarm rings such as the long hooter alarm which gives an alert of a serious disaster which would have occurred, such a preparedness policy validates the effectiveness of the implementation of disaster management policies in Zimasco Pvt Limited. This preparedness measure implemented by Zimasco has been effective, as these have lessened the vulnerability of the company to disasters.

c) Response.

Zimasco steel has its own ways of responding to a disaster for when a disaster strikes the first action to be done is to ring the cyrines which determine the type and level of the disaster. Just after the cyrines rings the Emergency control centre responds by calling all the emergency assistance to disassemble the disaster. With the alert of the cyrines all workers would have mounted at their assembly points and head count is done so as quickly identify the injured and those who would have failed to evacuate from the plant. By this time the First aiders would have already started assisting those who need immediate help and the readily available ambulance transport those who would be seriously injured to Zimasco Shurugwi hospital. The fire fighters may also be of great assistant especially if the disaster was caused by fire, they would use their fire tenders to attack the fire and make sure that everyone is at a safe place. Zimasco have signed contract with various hospitals such as Mpilo hospital in Bulawayo, Avenue Private Hospital in Harare and Emras in Kwekwe therefore if the disaster is very serious the above mentioned

hospitals are contacted for emergency help therefore this may demonstrate the effectiveness response of Zimasco in disasters. Still under the aspect of response, Zimasco has made it a point in its policies that every worker affected by a disaster is catered for his or her medical attention till recovery. Therefore the policies implemented under response stage are effective and are part of the company's disaster management.

2.2 Zimasco Emergency Plan on How to Respond to an Emergency Situation

1. Establish the nature of the emergency situation and raise the appropriate alarm.
2. Call for help by contacting Emergency Control Centre and informing the sectional Emergency Coordinator and Provisional Emergency Coordinator and highlight the type of assistance to be required.
3. Assist the injured or affected persons. And evaluate the need to systematically shutdown operation.
4. Investigate extent of damage and establish affected persons areas.
5. Assemble at the designated assembly point.
6. Await instructions and response of Emergency Coordinator.
7. Brief Emergency Coordinator of the sequence of events and follow instructions given (Emergency Coordinator takes over).
8. Wait for declaration of all clear.

d) Recovery or Rehabilitation.

Rehabilitation is a stage where by the company recover to their normal functioning and reconstructing all the damaged properties within the plant. Just after a disaster occurs the board of directors of NOSA and SHE superintendents undertake a survey to evaluate and analyze the causes of the disaster whether it was human induced or it was triggered by lack of adequate resources or it occurred naturally. After the assessment is done amendments to mitigate the potential of another disaster may follow .Taking for instance on the 31st of July 2014 an electrical explosion took place which resulted in a disaster and many people

were injured, and just after the survey was done the SHE board of superintendents decided to buy neumo jackets which the company did not have as PPE clothing from the very beginning which protected the workers from burns. The rehabilitation stage has also been used as a stage at which recovery from a disaster is undertaken such as that at Zimasco were new properties, tools and machines are bought to replace the damaged ones. Also under this stage development has been promoted by making adjustments and amendments in disaster management policy thus the rate at which development takes place becomes higher. Taking for example on the 2nd of September 2014 the organization bought fire extinguishers, such an act resulted in the increase of the effectiveness of disaster management policies implemented in Zimasco Pvt Limited hence automatically promoting development.

2.3 The Effects of Disaster Management Policies in Zimasco Pvt Limited Steel

The level at which disasters has been occurring in Zimasco has become a normal routine within the organization. According to the statistics given by NOSA and SHE board of Directors it has been noted that since 2013 more than 65 disasters has been experienced in the company. Whenever a disaster occurs a survey or assessment is done analyzing the root cause of the disaster and due to these assessments the scholar was able to identify that most of the disasters in Zimasco are caused by lack of resources or policies which would not be put into practical. Taking for instance the last disaster that occurred in Zimasco on the 31st of July 2014 was caused due to lack of effective implementation of the policy Stop and Fix. The company introduced a disaster management policy stop and fix where by workers are expected to stop production if there is any machine which is of substandard and on this case this policy was not used due to the fact that the resources needed to fix were not available thus the company decided to continue with production hence leading to an accident. An explosion of electricity took place and workers within the electronic department where seriously injured. Therefore this validates the effects of disaster management policies in Zimasco Steel.

Through the use of questionnaires the scholar was able to note that at times Zimasco Pvt Limited introduce polices which are never implemented in the practical side. According g to the Zimasco Emergency Plan of May 2014 it is a mandatory that before a worker is employed to any field he or she is supposed to undertake pre training so as to get equipped in case of a disaster but this has seem not to tally with what is happening on the ground. Taking for instance in November 2013

an engineer was involved in a disaster whereby he went to the furnace sector which is one of the most dangerous sectors in Zimasco. The engineer went to survey the smooth movement of furnaces without wearing fire resistant shoe, since the zone consists of 11 KV the worker had a direct contact with wire copper plates and he was electrocuted. Such an incident may show how Zimasco has failed to implement its policies effectively. Looking at this according to the Disaster management plan of Zimasco one is not allowed to enter the furnace zone without proper PPE and without signing for a Work Permit but the Engineer did so which clearly demonstrate the effects of policies implemented by Zimasco in Disaster Management.

More so looking at the pre training session some of the workers of Zimasco have not been trained on how to respond to a disaster. In some focus group with general workers the scholar also noted that some of the pre training sessions which are to be done according to the disaster management policies some workers were not aware of them. Through these discussions workers were not even aware of the use of fire assembly points since the session has not been given much priority. Also through Questioners workers did not have knowledge on how to evacuate from the building in case of a disaster. Such lack of pre training has resulted in increases of disasters as workers would not be aware of actions to be undertaken in case a disaster strikes. Apart from this Zimasco has also neglected to effectively put some of its polices into action thus resulting in the increase of disasters taking place within the organization. Taking for instance the company implemented the policy PPM which is a process of cleaning and maintaining machines on regular basis so as to reduce the potential hazards which may lead to a disaster. On the 26th January 2010 five workers were electrocuted as they were trying to blow away dust from the copper plates which were not cleaned by the department of PPM. As in case of 2012 where by the same disaster took place and eight people were injured thus showing the level of disasters occurring in Zimasco due to negligence ,and even after the weakness of the policy was identified the disaster management policy was not amended to reduce the impact of disasters. Therefore this clearly shows the effects of disaster management policies in Zimasco Steel.

Also lack of resources in abundance has also made the rate of disasters in Zimasco to increase its effects in a negative way. Through interviews with the General workers the scholar was able to note that Zimasco does not have adequate resources thus at times it becomes difficult to

implement policies without resources. For example according to the Disaster management Policy of Zimasco, under normal circumstances a safety shoe is supposed to be used for a period of three months and after that, the company should provide new safety shoes to the workers. However due to the fact that accidents or inconveniences may occur and the shoes may worn out at times. Zimasco would not have safety shoes in stock thus resulting in workers using safety shoes which are substandard. By so doing the PPE policy which states that workers should have proper protective cloth will be breeched and this may make workers vulnerable to disasters. Therefore this may highlight the effects of disaster management policies in Zimasco. Also as a way of mitigating against disasters Zimasco has introduced Alarm Alert policy where by every alarm has its specific purpose. However, due to lack of pre training some general workers have not been able to recognize some of the alarms thus paving way to disasters. Through observation the researcher was able to note that most of the general workers were not familiar with alarms especially the disaster alarms for most of them are familiar with startup shift and end up shifts alarms. Therefore lack of acknowledgement by workers demonstrate lack of pre training and also lack of disaster management practice thus these may be polices in name, on documents but not into practice.

2.4 How Zimasco Operations are affecting Health and Environment of the local community and Workers of Zimasco Pvt Limited

Zimasco Pvt Limited Company is located in Ward 2 near the local community of Mbizo 1 ME. According to the analysis done by the researcher on the effectiveness of disaster management policies of Zimasco, the company has tried its level best to implement policies which mitigate, prevent and respond to various disasters which may strike within the premises, though these policies have some shortcoming to an immense degree. However the company has not implemented disaster management policies to other potential hazards surrounding the premises which are local communities.

a.) Health effects

The scholar was able to observe that the operation of the company is the smelting of ferrochrome, the health and environmental hazard is the smoke being produced or released during production and the effect is likelihood of diseases and environmental pollution. Zimasco Pvt Limited has failed to take into consideration measures to mitigate the potential hazards

caused by the company having effect on the local community and general workers at times. Zimasco Pvt Limited Company has resulted in a vast number of healthy effects. Taking for instance during the process of production of ferrochrome so many healthy effects have tend to be a problem. Usually these healthy effects affect people who reside by the local communities of the company and general workers at times. Mostly the smelting of ferrochrome is done by fire which may produce smokes which are toxins and these may affect both the workers and the community. For example the various smokes produced by Zimasco may cause respiratory illness such as lung cancer, such a health effect has resulted in members of the community being affected by lung cancer especially house wives and children who spent most of their time within the community. . Additionally the fumes of dust produced by Zimasco during the transportation of ferrochrome into furnaces also cause air prone diseases such as T.B and since the dust and gases are released into the air the people in the local communities are affected by these gases to the extent that they have become so vulnerable to T.B. Also through questioners the researcher was able to note that most of the children who are schooling at Chiedza Primary School near Zimasco have a problem of poor eye sight due to the fume dust smoke released by Zimasco which affect them hence resulting in poor eye sights. These effects have clearly highlighted how the company has failed to mitigate hazards which affect the local community. Apart from the above mentioned health effects, the company have also caused skin infections such as eczema and ring worms especially to children. Through FGD the researcher was able to note that the children who reside within the local community of the company are vulnerable to skin infections which are caused by the dust from slags produced by Zimasco. As the company deposits its slag wastes near the local community when children are playing most likely they are attracted to the slag wastes to play with. Hence slag wastes consists of chemicals which is harmful to skin thus trough the slag wastes dumped near the local communities children have become prone to skin infections. Zimasco has constructed slime dams for the purpose of recycling of water, if the dam breeches this may contaminate underground water since water contains chrome which is caslogenic or poisonous. Taking for instance in October 2010 the slime dam walls breeched and this resulted in the contamination of water and water borne diseases which affected the local community. Such a disaster may show the health effects impacted on the community by Zimasco. However one would be doing gross injustice to over emphasis on the negative effects caused by Zimasco on the community for there are some positive effects that the company has brought forward through

the policies it implemented. Taking for instance the fact that the company is located a few meters away from the local community this has made the community to enjoy the benefits of the company such as the use of clean and treated water by Zimasco thus the local community has benefited from Zimasco. Also in 2008 the company even provided water purification tablets to the community which reduced the impact of cholera to the local community. Additionally in case of any disaster within the community the company uses its own resources to respond to a disaster in the community. For example in 2011 there was a fire outbreak within the local community, the company assisted by using its fire tender to attack the fire and the fire fighters of Zimasco disassembled the fire, by so doing it saved the lives of a family in the local community. Additionally the company has also helped the community by putting awareness alert stickers which educated the people on the signs and symptoms of Ebola hence protecting the local community from a potential hazard. Also the company has provided bins for the community thus avoiding promoting health hazards though it is to a limited degree.

b.) Environmental Effects

The production of Zimasco Pvt Limited Company has been occurring at the expense of the local community in a negative environmental manner. For the company has caused environmental damages to the local community,, which clearly shows the effects of the company on the environment. Through observation the student was able to note that most of the wastes released during the processing of ferrochrome are deposited near the local communities, thus causing land pollution which affect the immediate dwellers of the local community, as the land is polluted hence it becomes even difficult for any farming activities to be done since the land will be polluted by slag wastes which contains so many chemicals thus affecting the environment. Zimasco has failed to implement disaster management policies which protect the community environment from various hazards influenced by the production of the industry. Taking for instance the fume dust of smokes released into the air by Zimasco has caused air pollution which affects the environment. Additionally Zimasco has also caused emission of hazardous material into the environment which has caused loss of aquatic life of living organisms and natural fertility within the soils resulting to low yields harvested by the local community thus affecting even the source of food of the local community. For example in 2011 the local community harvested low yields due to the fact that the chemicals released by the company affected their lands and the chemicals produced destroyed their plants.

More so the flooding of slime dams in Zimasco has even caused the contamination of water in the local communities .Taking for example in 2003 in August there was a breach on the slime dam walls which caused flooding and this resulted in the flowing of contaminated caslogenic water into the local community and people were affected as they were told to stop using water for a period of time due to the contamination that had occurred. By so doing this highlighted the way in which the production of Zimasco has environmental effect on the community. However Zimasco has not entirely caused damage to the environment for there are some of the policies that it has initiated which promotes the protection of the environment of the local community. Taking for instance Zimasco has commemorated the tree plantation day as a way of conserving the environment by initiating the planting of trees around Zimasco and within the local communities thus protecting the environment. The company has been trying to protect the environment by introducing the recycle water method, reuse which has act as a way of saving water within the industry hence increasing the availability of water to the local community thus paving way to development as more water could have been consumed by the industry. Therefore this validates the effects of Zimasco on the local community due to lack of implementation of disaster management policies in local communities.

Chapter 3 Challenges faced by Zimasco Pvt Limited in trying to implement disaster management policies into practice

3.0 Introduction

The aspect of development and challenges are intertwined for whenever one of these aspect occur it occurs at the expense of the other, for it is difficult for development to take place when there is a vast number of challenges or problems rather underdevelopment thrives thus the need to look for alternatives is needed so as so allow development to take place. Zimasco Pvt Limited has tried its level best to implement disaster management policies and practices that it has put in place, but during the process of implementation of policies the company has encountered many challenges that need to be addressed. Since its first operation in 1926 Zimasco was owned by three different shareholders first it was the Union Carbide Cooperation secondly by China and thirdly by both China and Zimbabwe though China was the largest shareholder. This being said and done the vulnerability of the company to disasters has increased hence resulting in many challenges being faced by the company. One has to note that since 2008 Zimbabwe has faced an economic instability till the present day and that being the case this has been the root cause of some of the challenges experienced by Zimasco Pvt Limited Company. The company has faced challenges especially the general workers, community and the company as a whole and these challenges has increased the vulnerability of Zimasco to disasters.

However the scholar brought forward recommendations which Zimasco may use as an alternative to lessen the impact of disaster management and promote its effectiveness hence raising the flag of development to its greatest heights. This chapter is going to focus more on the challenges faced by Zimasco in implementing disaster management policies. It is also going to emphasis on the efforts of the government in trying to lessen the vulnerability of potential hazards which affect the effectiveness of disaster management and development.

3.1 Challenges Faced by Zimasco in Implementing Disaster Management Policies into Practice

From the researcher's findings a vast number of challenges in implementing disaster management were noted by the scholar and some of the challenges are as follows:

Inadequate finance is also one of the major challenges encountered by Zimasco in trying to implement disaster management policies. As much as Zimasco is a very big company whose machines and tools are heavy machines its opportunity of replacing machines and tools from time to time is limited, so whenever there is need of changing the tools and machinery the company may face difficulties to change machines as most of the machinery used are expensive and even imported from other countries. Taking for example the company imports machinery such as car charges and convey belts which transport ferrochrome during the smelting process. These heavy machinery are mostly imported from China and South Africa and there are expensive to the extent that it is difficult for Zimasco to purchase such machines regularly though the policy of disaster management requires the regular change of machines especially if they are of substandard. However the company is left with no option other than to fix the substandard machines and continue with production. Such a challenge may result in the increased vulnerability of Zimasco to various disasters, hence enlightening on how lack of finance has been a challenge to the company in trying to implement disaster management policies into practice. Most of the policies implemented by Zimasco to lessen the impact of disasters need funds in abundance such as the stop and fix policy which states that production should stop if there is any problem to the machines hence the repairing of machines needs more funds. Also the 0 tolerance policy which states that the company should not undertake any production tolerating machinery problems thus this policy to be effective there is need for funds to buy machines substituting the substandard ones. Additionally the hazard identification and risk assessment to be undertaken it requires more funds hence Zimasco has a challenge in the finance to implement disaster management policies. Therefore this highlights how lack of funds is one of the major problems faced by Zimasco in trying to implement disaster management.

Moving further on, instead of being a private entity Zimasco is now being a civic entity which is one of the major challenges which the company is facing. Zimasco has been assisting a vast number of people in case of disasters. Taking for example Zimasco has been assisting the local community to disassemble fire in case of any fire disasters. It has also assisted the father cities such as the City council, whose been asking for assistance in case any disaster strike in the city of Kwekwe. This can be evidenced by the 17th of September event where by the P.G complex in the C.B.D of Kwekwe was attacked by fire and the city council asked for assistance from Zimasco to assist with its fire tender and fire fighters to disassemble the fire. All this being said and done the fire tender of Zimasco was damaged its hose reels during the dis assembling of fire hence the city council who had asked for assistance did not assist in the repairing rather every end of the month it requires its taxation to be fully paid by Zimasco thus showing some of the challenges faced by Zimasco. Also such an effort has resulted in the deterioration of the quality of disaster management resources of Zimasco. Even if the company assist the local community and the City fathers, in case of any deterioration to the company's resources they would have used in assisting the community and the city council the two neither buy nor repair the damaged machinery rather the company faces the challenge alone. Therefore this has become one of the challenge faced by Zimasco in trying to implement disaster management ,as its resources are undertaking multi tasks when disasters occurs in the whole city and within the plant of Zimasco.

Additionally heavy taxation is also one of the major challenges faced by Zimasco, the company has been unreasonably taxed by various sectors to the extent that at times when the production is low some of the funds for disaster management are diverted to pay taxes so as to allow the smooth ongoing of production of Zimasco .The company has been taxed by City council, Zimra, EMIR to mention but a few. All these taxes have drained the funds of the company thus it has been difficult to give disaster management a priority since heavy taxation has wiped away a large amount of money. Therefore this demonstrates how heavy taxation by different sectors has been one of the major challenges faced by Zimasco in trying to implement disaster management. Furthermore the availability of foreign investors as overall shareholders has also been one of the major challenges faced by Zimasco. Since 1926 Zimasco has been owned by the Union Carbide cooperation in United Kingdom and now it is currently owned by China who is the overall largest shareholder and since it was owned by foreign investors the company's disaster policies

implemented decreased in effectiveness and became so prone to disasters. However one has to note that foreign investors prioritize production at the expense of disaster management. So even if disaster management practices are implemented by NOSA and SHE supretendant, the foreign investors do not approve especially if it drains more funds. Thus by so doing many damages has been caused by Zimasco, it could be to the environment or to the community but since it does not affect the shareholder who by any chance is not patriot and is not concern with the protection of Zimbabwe in any way, damages has continued. Therefore this may show that the inclusion of foreign investors as overall shareholders has also been a challenge faced by Zimasco in trying to implement disaster management mechanisms.

Poor Communication has also been noted as one of the major challenges faced by Zimasco. Most of the time general workers fail to interpret the different alarms alert designed by the company as a preparedness measure to disaster management. Thus by so doing this has resulted in the increase of the impact of disasters in Zimasco. It was through questionnaires and observation when the researcher was able to note that most of the general workers do not know the purpose of different alarms or cyrines designed by SHE and NOSA board of directors in the preparedness stage in disaster management. This has demonstrated how poor communication has also been a challenge faced by Zimasco. Also lack of cooperation to exercise disaster management policies has also been one of the challenges faced by Zimasco. Some of the general workers have also been ignorant to participate in the policies implemented to lessen the impact of disasters. If one looks closely one is of the view that NOSA and SHE supretendant has tried its level best to implement disaster management strategies, but this has been seen as water down the drain as all these efforts are regarded useless by the general workers who deliberately choose not to follow the disaster management principles. Taking for example workers are given proper PPE but some may choose not to wear safety shoes or safety clothing like a helmet for no apparent reason and by doing so the failure of general workers to cooperate with the disaster management policies has been seen as a major challenge faced by Zimasco in implementing policies into practice.

Furthermore some workers have been undermined of their contribution in disaster management which is also one of the major challenges in Zimasco Pvt Limited Company. Workers are the

most people vulnerable to various disasters since they undertake all the hard works with various potential hazards which may lead to disasters. However some of their contribution in policy formulation is not taken into consideration hence they constitute the largest vulnerable group to disasters. Taking for example in the electricity department the general workers asked for neumo jackets as part of PPE but this was not taken into consideration till the 31st of July when a disaster occurred and after that neumo jackets were later purchased. Therefore this may validate how the undermining of general workers contribution is also one of the challenges in Zimasco. Also repatriation of profits back to the mother country has been identified as one of the challenges faced by Zimasco. In most cases since China owns about 92% of the company it enjoys the largest profits of the company and through this most of the profits are repatriated back to the mother country thus it becomes difficult for the Safety and Environmental officers to implement policies or neither amend them as most of the funds required to undertake that process is sent back to the mother country. Thus making it difficult to amend the disaster emergency plan policy. Therefore this demonstrates how repatriation of profits back to the mother country has been a challenge in trying to implement disaster management in Zimasco.

Provision of below standard machinery and tools has also been one of the challenges faced by Zimasco. In most cases Zimasco machinery and tools are imported from China since they have the overall say on the company. However China is familiar with poor quality of machines and tools which do not last for a long period of time. This has resulted in Zimasco purchasing substandard goods and since the company usually uses heavy machines this means that from time to time machines and tools are repaired thus by repairing from time to time it becomes obvious that the machines are of substandard. According to the contributions of general workers in focus group discussions they postulated that Chinese machinery is of poor quality and substandard which increase the impact of disasters in Zimasco. Having this on the ground no action has been undertaken to stop the provision of these goods since China is the biggest shareholder. Therefore this may demonstrate how below standard machinery and tools provided by China has been a challenge faced by Zimasco. Apart from the above mentioned challenge surveys which are not thorough has been a challenge in Zimasco Company. For the surveys undertaken by Zimasco after a disaster occurs are not done effectively thus a disaster can be portrayed as human induced while it would have been caused by lack of resources. Through

interviews the scholar was able to point out that most of the disasters assessed by Zimasco are said to have been human induced thus protecting the name of the company at the expense of workers. Therefore this has even increased the potential hazards to disasters since the real cause of disaster is not addressed. Hence postulating how assessments done improperly has been a challenge in Zimasco Pvt Company

More so some one of the major challenge in Zimasco is that most of the disaster management polices do not tally with what is practiced on the ground. Taking for example according to the Emergency Plan of 2014 May it states that proper PPE should be in stock so that if anyone may face any inconveniences and the PPE is worn out immediate replacement is done, however Zimasco has also faced a challenge of not having PPE in stock such that even newly employed members at times work without proper PPE until it is available. Such a challenge has increased the potential of Zimasco vulnerability to disasters .Thus postulating how policies which are never put in practical have also been a challenge faced by Zimasco Pvt Limited Company.

3.2 Efforts of the Government towards lessening the Impact of Disasters in Zimasco Private limited

Though Zimbabwe is facing economic instability within its country. The government has tried its level best to introduce policies that lessen the impact of disasters in Zimasco Pvt limited. The government under its city fathers the city council has advised Zimasco to meet from time to time with other companies together with the local government coordinating and assisting each other on how to implement policies which lessen the impact of disasters .This can be evidenced by meetings held every end of month by city council which consists of companies like Sable Chemicals, Zisco Steel and Zim Plants discussing on how disasters can be mitigated as well as how companies can implement and formulate policies that lessen the impact of disasters. Also the government has introduced taxes such as Environmental tax which leave Zimasco with no option other than to reduce its destruction activities. The government allerg that the company should pay taxes accordingly to its damage. It has even introduced the polluter pays principle which has made Zimasco to put measures to reduce its pollution if the environment is disturbed s it pays more money if it undertake activities which disturb the environment .The government has also assisted to coordinate the formulation of disaster plans within the district. For most of the

policies implemented by Zimasco, are policies which the government has coordinated and formulated so as to lessen the impact of disasters within the company. The government has also shown its efforts on Zimasco's disaster management by formulating the CPU within the district charged by the administrator and this CPU act as a manual which guide industries and other sectors from disasters through the policies formulated in it. However one has to note that the efforts of the government to disaster management in Zimasco are limited due to the fact that the country is facing an economic instability and also the government actually seek for the private companies like Zimasco to assist it this can be shown by the Chronicle article Newspaper which states that Zanu PF led government was geared for the challenge of improving the economy through resuscitating industries thus showing how the government is even depending in industries for its economic growth. Therefore the government has not undertaken so many efforts to reduce the impact of disasters in Zimasco rather it depend on the company for economic growth.

Conclusion

4.0 Introduction

Zimasco Private limited Company has tried its level best to undertake and implement disaster management policies effectively within the company. Policies such as prevention measures, preparedness measures, response measures and rehabilitation measures has been implemented by the company as a way of increasing their effectiveness in practicing disaster management. However it would be unfair for one to entirely say Zimasco undertook disaster management effectively at all times since through research findings it has been noted that the company has some shortcomings and loop holes in implementing disaster management mechanisms though this is to a limited degree. This chapter is going to review more on the overall analysis given by the scholar on disaster management on each and every chapter. Also this sector is going to highlight the summary of the study of the whole topic and recommendations which the company may put in place so as to reduce the vulnerability of Zimasco Pvt Limited in disasters hence paving way to development

4.1 Summary of the study

Disaster management has been one of the key areas which have not been given priority in Africa and Zimbabwe as a whole. For many countries may choose to face the consequences of a disaster and have huge burdens on the rehabilitation stage than to prevent or mitigate for a disaster before it strikes which is much more cheaper. If one looks closely at the effectiveness of disaster management in industries one is of the view that disaster management is not given a mandatory which is why many industrial companies has faced so many disasters within their companies. Looking specifically at Zimasco Pvt Limited Company the case study, it has tried to undertake some activities to lessen the impact of disasters which validates the effectiveness of disaster management in Zimasco. The company has drafted emergency plan, encourage proper PPE for all workers and even offer pre training exercises on disasters which is part and parcel of disaster management practices. Therefore this clearly demonstrates the level of the effectiveness of disaster management practiced in Zimasco. However according to the research findings most of the policies put in place by Zimasco are policies in name on documents but not in practical. In most cases the company has concentrated in focusing on disasters which it is vulnerable to hence

eliminating some of the hazards which have the potential of causing disasters. However all being said and done the researcher was able to analyze that Zimasco has undertaken disaster management policies into practice. However one would be doing gross injustice for not focusing on some of the policies which the company has failed to implement effectively in a practical manner though it is to a limited degree. Therefore in overall analysis one is to say Zimasco tries to implement disaster management policies into practical but at times it fails to do so due to various reasons such as lack of resources though it is to an immense degree.

4.2 Conclusion

In conclusion one is to conclude that disasters has occurred in various countries such as Nigeria, Indian Ocean, Bangladesh, Algeria and Zimbabwe to mention but a few, these countries have come up with policies so as to prevent the outbreak of disasters in their countries. However as the researcher analyzed it was noted that on a global perspective disasters have been occurring due to disaster management which has not been fully implemented. Also the legislative framework of Zimbabwe has tried its level best to fully implement policies that lessen the impact of disasters. Zimasco Pvt Limited Company has undertaken activities to lessen the impact of disasters such as preparedness, response and rehabilitation measures thus showing the level of its effectiveness in disaster management practices. The research also concluded how Zimasco Pvt Limited Company has even affected the local community through its productive activities such as environmental and air pollution. However some of these policies have some weaknesses in trying to implement disaster management though it is to a limited degree. Also according to the scholar's findings Zimasco has faced a vast number of challenges in trying to implement disaster management such as lack of funds, poor communication, substandard machines and the positive impact of foreign investors as overall shareholders. However some of the research findings also highlighted that disaster management has not been entirely given priority due to some of the challenges incurred by the company in disaster management. However there are some of the recommendations which the scholar recommended to be implemented by Zimasco Pvt Limited so as to allow a smooth flowing, effective disaster management. Therefore one is to conclude that indeed Zimasco Pvt Limited Company has tried its level best to implement disaster management practices practically to a larger extent, though the company has faced some challenges and problem hence failing to implement all the policies in a practical manner though

it is to a limited degree. However recommendations have been brought forward so as to have an overall effective disaster management practices thus leading to development.

4.3 Recommendations for effective Disaster management Practices in Zimasco Pvt Limited Company

In trying to promote the effectiveness of disaster management in Zimbabwe the student came up with recommendations which can be implemented by the company so as to have an effective disaster management policy. Therefore some of the recommendations are as follows:

Implementation of pre training exercise to all workers in Zimasco regardless of position or job title. In most cases Zimasco usually offer pre training exercise but the training is not compulsory to everyone some of the executive members do not undertake this exercise. Therefore the company should offer training that is effective and strictly compulsory to everyone starting from general workers, general cleaners, security officers and most importantly the executive members. For whenever disaster management pre training is undertaken it becomes easier for workers to give attention to different alerts and signs which declare the occurrence of disasters. Also by undertaking pre training exercise this may reduce the level at which disasters may occur since everyone would be aware of the disaster management policy practices. Apart from this, pre training when exercised it is of paramount importance to note that it enlightens the workers on what to do, when to do it and how to do it. By doing so this can demonstrate how Zimasco may lessen its impact of disasters through recommending overall pre training to every worker in Zimasco Pvt Limited, thus development can also be promoted through pre training exercise. Furthermore usually accidents are caused by the use of tools and machines below standard. However Zimasco should implement they policy of removal of tools and machinery below standard effectively. Usually these types of machines and tools are so unpredictable for it is difficult for one to dictate when they can cause a disaster. Therefore it is better for the company to take a precautionary measure by ensuring the removal of all tools which are substandard during the production process. According to some research findings substandard poor quality machines causes disasters therefore if these type of machines are removed automatically the vulnerability of Zimasco to disasters is reduced hence promoting sustainable development within the company since the challenge which have been disturbing development and disaster management is addressed.

The researcher also recommends Zimasco to interpret policies implemented in disaster management effectively. In most cases policies implemented by Zimasco would just be policies which the general workers, “the most vulnerable group” would not be aware of. However the company with the assistance of NOSA and SHE board of directors should interpret every policy to workers and how it works so that it becomes easier for workers to exercise the policies into practice. For example through questionnaires by the researcher it was noted that, for many years workers did not know what fire assembly points are designed for other than assembling there when there is a meeting thus in case of a fire disaster people may not be aware of where to go though these policies are written and well explained in the Emergency Plan of 2014, it has to be interpreted effectively for the benefit and safety of every worker. Also it has to be noted that interpreting the policies is very important since some of the workers such as general cleaners are illiterate thus by explaining it becomes easier for them to follow the policies. Therefore by interpreting policies of disaster management it becomes easier for people to abide to them since the policies would have been well interpreted thus reducing the impact of disasters through following the procedures in case of any disaster.

Additionally the scholar also recommends the company workers to report the unsafe hazard that might cause disasters. Usually general workers may identify a hazard which might cause a disaster but due to the fact that the company lacks resources the workers may view it as useless to report a hazard which cannot be addressed, however this has a great impact on disasters. Therefore workers should report any unsafe hazards such as broken tools, substandard machines, blocked pipes or even dissembled car charges as these unsafe hazards has high chances of causing disasters. Therefore these hazards have to be reported until they are addressed thus lessening the impact of disasters which may automatically raise the flag of development high. Still on the same point the Safety board of directors should undertake a hazard identification assessment without depending on the reports of general workers since at times general workers may not be able to notify a hazard. However if both general workers and safety officers work together in identifying and reporting hazards this may reduce the vulnerability of Zimasco to disasters. Additionally the researcher advises that the government should be independent from private entities. Zimasco has been facing challenges on how the government has developed a

dependency syndrome on the resources of the company in case of any disaster occurrence in the city of Kwekwe. However the scholar recommends that the government should purchase its own resources to cater for disasters without deteriorating the quality of machines purchased by Zimasco Company. By doing so this could be a measure to reduce the damage of resources such as machines during assisting the government. If this recommendation is put into practice this may mean that the disaster management policy will be practiced using quality serviced machines used by Zimasco alone hence increasing the life span of the machines. Taking for example if the fire tender and fire extinguishers only serve a purpose in Zimasco company alone the rate at which these machines may sustain the company is longer than if the machine was both used by the civic and the private entities. Also this could have saved the company funds which they use to repair the damage caused by civic, these funds may be diverted and serve other policies to be implemented thus promoting development.

Moving further on the government should also charge reasonable taxes to Zimasco so as to create an opportunity for disaster management to be upheld. The student was able to note that once Zimasco is heavily taxed it becomes difficult for the company to spare more funds for the implementation of disaster management. Therefore if the governments reduce its taxation some of the funds may be diverted to cater for disaster management. Taking for example Zimasco is heavily taxed by ZIMRA, EMIR, City Council to mention but a few. If all these sectors within the government reduce their heavy taxation this may create an opportunity for Zimasco to undertake disaster management practices as there would be available funds to do so. Therefore the reduction of taxes by the government can be one of the factors that can promote disaster management implementation and practices in Zimasco Pvt Limited. Once disaster management is given a mandatory development of Zimasco may follow suit.

Another recommendation put forward by the researcher is that Zimasco should also formulate a board of Members from general workers whose duty is to stand and represent the whole of general workers in the aspect of disaster management. During FGD the researcher noted that the contribution of general workers is not taken into consideration by the Safety board of directors in the aspect of disaster management hence they constitute the largest percentage of workers vulnerable to disaster. Therefore this group would act as a representative to air out views of the

workers on the aspect of disaster management. Through this board Zimasco will have a privilege of quickly identifying potential hazards done by general workers who spent most of their time doing the hard work. Thus such a formulation of a committee may result in effective disaster management. Also the formation of this board may even lessen the impact of disasters as the most vulnerable group would have air out their views thus paving way to development. Also through observation the researcher was able to note that some of the workers did not cooperate to the disaster management policies put in place by Zimasco. However the student recommends that the company should introduce a policy which calls for dismissal to those who would have violated the disaster management policies. By doing so this may live workers with no option other than to follow the disaster management policy hence securing their jobs as it is a source of income to the workers. Currently Zimbabwe has been facing a high rate of unemployment thus if this kind of policy is put in place this may mean the effectiveness of disaster management policies at its greatest heights. Since every worker will try his or her level best to secure their job as it is the only source of income. Also this may increase the cooperation of general workers since they are governed by policies to do so. By doing so this may increase the upholding of disaster management policy in Zimasco Pvt limited. According to some of the research findings, the scholar pointed out that most of the workers do not know how to dictate the various meanings of alarms expect for the most familiar ones such as the startup, lunch, break, shift change and time out alarms. Most of the disaster management cyrines are not known by workers however Zimasco should put chats and notices all over the premises which explain each and every function of different alarms and how to react to each and every one of it. Additionally to make this recommendation more effective under communication, after every alarm is ranged there should be a voice alert which remind people of what type of alarm is it and its function. By doing so this may result in no time workers recognize being able to recognize all types of alarms since the voice is unavoidable and due to regular implementation of the voice alarm this may attract all workers to listen attentively to it hence by no time they would know what each and every alarm represent. Therefore by so doing this may increase the effectiveness of disaster management policies implemented in Zimasco Pvt Limited.

Apart from the above mentioned recommendations the company should also avoid shortcuts which cripple the smooth flowing of disaster management. In most cases companies may prefer not to undertake disaster management routines properly as they prefer short cuts so as to lessen

financial burdens, hence shortcuts cripple the effectiveness of disaster management. In Zimasco the scholar recommended the use of proper hierarchical way of disaster management in every sector. Taking for example the PPM policy which requires regular cleaning and maintenance of the machines. Such policies if eliminated may result in disasters. For example a general worker in Zimasco was electrocuted trying to blow away dust on copper plates hence this was all because of the shortcut done by the PPM cleaners who did not perform their duty on regular basis. Therefore avoiding shortcuts may lessen the impact of disasters in Zimasco. An effective implementation of disaster management cycle is also a recommendation brought forward by the researcher which Zimasco may implement for the ongoing of effective disaster management. Cunny (1983) postulates that the use of a disaster management cycle may result in the impact of disasters being lessened and also the development of where the cycle has been implemented. This may show that if the disaster management cycle from Prevention or Mitigation, Preparedness, Response and Rehabilitation is given priority this may mean that development may take place at its greatest height. Also Zimasco has to emphasis on implementing the prevention mitigation precautionary measures more than the rehabilitation measures since by preventing a disaster it lessens the resources needed for the rehabilitation as the disaster will not heavily strike and cause damage due to the effective prevention measures which would have been put in place by Zimasco.

Also since Zimasco is a very big company it should not entirely rely on the facilities in Shurugwi for emergency since the location is too far away from Kwekwe division Zimasco Company. The Company should construct a hospital in the district which only caters for the workers in Zimasco. Also still in the same line of thinking the company should employ doctors who are permanently located in Kwekwe because if a disaster strike and the doctor will be in Shurugwi this may mean that all the patients will wait for that doctor to come, hence if it is an emergency workers may die because of injuries due to the fact that there would be no doctor to attend to their needs. Therefore the company is recommended to construct a hospital and protect the safety of the people through the appointment of many doctors within the Kwekwe region. Additionally the company should always try its level best to implement disaster management policies into practical so as to lessen the impact of disasters. If disaster management is effective the

development and production of a company is at its greatest heights but once it is not given a priority more money is spent in the rehabilitation process. Therefore Zimasco Pvt Limited has to try its level best to implement disaster management policies into practice so as to lessen the vulnerability of the company to disasters and to also create a road to development.

4.4 Conclusion

To conclude the whole chapter one is in a position to say indeed Zimasco Pvt limited Company has undertaken roles and implemented policies which lessen the vulnerability of Zimasco Pvt Limited Company to disasters such as PPE policy, Emergency Management Plan, Hazard identification and risk assessment and well serviced machines to reduce the impact of disasters. However in these policies there are some shortcomings, weaknesses which are part and parcel of them hence disturbing the flow of disaster management such as policies which are just on paper and never implemented into practical though this is to a lesser extent.

Reference List

- Ade, J, Mellenbergh, J.(2002). *Advising on Research Methods :A consultant's companion.Huizen* :Johannes Van Kessel Publishing.
- Alexander, D,(2002) *Principles of Emergency Planning and Management* .Terra Publishing ,California.
- Barton, A, (1969).*Communities in Disaster: A sociological Analysis*. Sage Publications Ontario.
- Benson and Clay (1998)
- Bernard, H.R, (2002). *Research Methods in Anthropology Qualitative and QuantitativeMethod*:3rd edition Alta Mira Press, Walnut Creek, California
- Bryman, A. (1999) *Social Research Methods*. New York: Oxford University
- Brundtland Commission (1987)
- Buffon,S (2003),*Managing Environmental Risk*, Juta, New Delhi.
- Callaham, M (2002) *Journal Prestige, Publication Bias*. London: Longman
- Charles, (2000). *Understanding the Industrial Revolution*. London, Rutledge.
- Chikoto, G and Sadiq .A,A Zimbabwe Emergency Management System: *A Promising Development*. Milakwee. USA published research project viewed 03 August 2003.
- Chikoto, G, (2004), Zimbabwe Emergency Management Systems: *Disaster Management Class Project* .Georgia State University, Atlanta, Georgia.
- Cred, (2010) *International Finance Cooperation*. Disasters and Emergency Management Activity, Guide for all teachers, Oxford publications, USA.
- Cunny, F, (1983), *Disasters and Development*, Oxford University Press, Oxford.
- Denzin, N.K, Lincoln, Y.(2000)*Handbook of Quantitative Research*: London Sage Publications, London.

Hoffman, A (2003) **Research for Writers**. London: A and C Black Publishers Limited.

Inter works, (1998) Model for a National Disaster Management Structure, Preparedness Plan and Supporting Legislation, viewed 14 March 2012

Jasvir ,P (2012). **Managing Environmental Risk**. McGrawHill.NewDehli.

Knight, P (1999). **Interwing for Social Scientist London** :Sage Publications. Kara,H (2012). **Research and Evaluation for Busy Practices. A time saving guide**,Bristol The Policy Press.

Martinussen, (1997), **The Effects of Environmental Catastrophes on the Third World Economics**,Prentice Hall , New Jersey.

Pope, (2006), **Fundamental of Emergency Planning**, Terra Publishing, Harpenden.

Richardson, T ,(2005), Managing Disasters in the 21st Century ,Longman ,London.

Robinson, A (1993). **Real World Research: A resource for Social Scientists and PracticesResearchers**.Malden Blackwell Publishing.

Savin Baden ,M and Major C (2013). **Qualitative Research : The essential guide ti theory and practice**.London and New York. Routledge.

Schwab, M (2009) **Draft Proposal :Journal for Artistic Research**.Ben University of Arts.

Suvillian, P (2005)-04-13),**Maurice R Hilleman dies created vacancies** .Washington Post.

Winer, R Ben S and Blakkie, R (2004) . **At Risk Natural Hazards, Peoples's Vulnerabilty and Disasters** ,RoutledgeWitshire.

Quarantelli. E,L (1998), **Where Management Go**. London Routledge.

Vancouver Island Health Authority (2013), Communication and Public relations ,Columbia, Britian.

http://www.ifrc.org/what_wed/disaster-management/abt_disaster/

http/www.cd pem .org/jm.

http trang fema.gov/web/edu/

<http://wwwprevention web.net/file/5142>.

4.6 Questionnaires

Appendix 1

Members of the Community

1. Name.....

2. Age.....

3. Occupation.....

4. Level of Education.....

5. Ward.....

6. Marital Status.....

7. For how long have you been residing in this community?

.....
.....

8. How many disasters that have occurred in Zimasco Steel that has affected you as a community?

.....
.....
.....
.....
.....

9. How frequent have these disasters occur?

.....
.....
.....

.....
.....
10. What efforts have the company done to the community in case of a disaster?

.....
.....
.....
.....
.....

11. Is there any kind of assistance that is given by Zimasco to people who would have been affected by a disaster?

.....
.....
.....
.....
.....

12. Are there any adjustments, and what are the practices that company has implemented to lessen the impact of disasters?

.....
.....
.....
.....
.....

.....
.....

13. What are the challenges that you have encountered as the local community near Zimasco, in terms of disaster?.....

.....

.....

.....

.....

.....

.....

14. What do you think has to be done to reduce disasters in Zimasco Steel?

.....

.....

.....

.....

.....

.....

Appendix 2.

General Workers.

1. Name.....

2. Age.....

3. Occupation.....

4. Marital Status.....

5. Employment Duration.....

6. When was the last time a disaster occurred in Zimasco Steel?

.....
.....
.....
.....
.....
.....

7. What practices have been put in place to protect general workers in case of a disaster?

.....
.....
.....
.....
.....
.....

8. How effective are these practices?

.....
.....
.....

.....
.....
.....

9. Have you been trained on how to react when a disaster occur.

.....
.....
.....
.....
.....
.....

10. What is the response of Zimasco Steel when a disaster strikes?

.....
.....
.....
.....
.....
.....

11. Is disaster Management given a priority in Zimasco Steel?

.....
.....
.....
.....
.....
.....

12. What are the challenges that you have faced in the sector of disaster management?

.....
.....

.....
.....
.....
.....

13. What do you think has to be done to improve disaster management in this company?

.....
.....
.....
.....
.....
.....

Appendix 3

Healthy and Environmental Safety Officers.

1. Name.....

2. Age.....

3. Marital Status.....

4. Employment Duration.....

5. What are the most disasters which this company is vulnerable to ?

.....
.....
.....
.....
.....

6. What are the mitigation, preparedness, response and recovery measures that you have implemented to lessen the impact of disasters in Zimasco?

.....
.....
.....
.....
.....
.....

7. How frequent are the disaster management policies amended by the company?

.....
.....
.....
.....

.....
.....
8. What has the government done to assist this company in case of a disaster?

.....
.....
.....
.....
.....
.....

9. What are the challenges that you have been facing to implement disaster management strategies?

.....
.....
.....
.....
.....
.....
.....

10. What do you think has to be done to ensure at the ongoing of development of Zimasco?

.....
.....
.....
.....
.....
.....

11. What do you think has to be done to improve disaster management?

.....

.....

.....

.....

.....

.....

.....

.....

Appendix 4

Focus Group Discussion Questionnaires for General Workers

1. What do you understand by the term disaster management?
2. What type of disasters is Zimasco mostly vulnerable to?
3. How many disasters that have occurred in Zimasco that you have witnessed?
4. What are the policies that Zimasco has implemented to lessen the impact of disasters within the company?
5. To what extent are these policies effective in implementing disaster management?
6. What are the challenges that the company has faced in implementing disaster management?
7. What do you think has to be done to lessen the vulnerability of the company to disasters?
8. Do you have any recommendations that you think can be implemented so as to have an effective disaster management policy?