

**NEXUS OF SOCIAL WORK AND DISASTER MANAGEMENT  
SERVICES: AN AFROCENTRIC PERSPECTIVE**

By

Matlakala Frans Koketso

RESEARCH THESIS

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## DECLARATION

I declare that the “**Nexus of Social Work and Disaster Management Services: An Afrocentric Perspective**” hereby submitted to the University of Limpopo, for the degree of Doctor of Philosophy in Social Work has not previously been submitted by me for a degree at this or any other university; that it is my work in design and in execution, and that all material contained herein has been duly acknowledged.

Matlakala, FK (Mr)

Surname, Initials (title)

04/04/2021

Date

## **DEDICATION**

I, Frans Koketso Matlakala, dedicate this thesis to my daughter, Keitumetse Hosiamé Boipelo, and my supervisor, Prof Jabulani Makhubele; it is their continuous encouragement and support that kept me focused. Thus, this research project is dedicated to them with much love. God bless you all.

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**LIST OF ABBREVIATIONS AND ACYRONYMS**

COVID-19	Coronavirus disease of 2019
CSWE	Council on Social Work Education
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
IFSW	International Federation of Social Workers
IK	Indigenous Knowledge
IKS	Indigenous Knowledge Systems
IPCC	Intergovernmental Panel on Climate Change
KPA	Key Performance Area
LEAD	Leadership for Environment And Development
NASW	National Association of Social Workers
NCS	Department of Education
NDMF	National Disaster Management Framework
PIE	Person-in-Environment
RSA	Republic of South Africa
SA	South Africa
SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus
STATS SA	Statistics South Africa
UNDP	United Nations Developmental Plan
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational Scientific Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nation International Strategy for Disaster Reduction
UNPFII	The United Nations Permanent Forum on Indigenous Issues
UNWTO	World Tourism Organization

WHO	World Health Organization
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## **ABSTRACT**

*South Africa as a whole, like any other part of the world, is not immune to natural disasters let alone its provinces and municipalities like Limpopo Province and Greater Tzaneen Local Municipality. The two most severe, common, and observable events in terms of natural disasters in these two areas are floods and droughts. The aim of this study was to explore and describe the nexus of social work and disaster management services through an Afrocentric perspective. This study adopted qualitative research approach using case study design operating within exploratory-descriptive designs. The study was conducted at Runnymede Village in Greater Tzaneen Local Municipality and was targeted at small-scale farmers, social workers, and disaster management officers. A combination of non-probability sampling techniques were used, that is, purposive and snowball techniques. Purposive sampling was used as the researcher selected social workers who dealt with Social Relief of distress, and disaster management officers who dealt with victims and survivors of natural disasters. The researcher used snowball technique to get those rural community members who were involved in small-scale farming and held Indigenous Knowledge Systems (IKS) at N'wa-Mitwa, Runnymede Village. Data were collected using individual interviews and focus group discussion and analysed thematically using Thematic Content Analysis. The study found that impoverished, children, women, and people living with disability were most vulnerable to natural disasters. It also accentuated that the cause of vulnerability to natural disasters can be drawn from socio-economic factor and corruption. The study concluded that people in rural areas were more susceptible to impact of natural disasters and recommends an integrated approach in assisting victims and survivors of natural disasters.*

Keywords: Natural disasters, social work, Indigenous knowledge systems, climate change, rural areas

# CHAPTER 1

## GENERAL ORIENTATION OF THE STUDY

*“I realised a disaster was coming. It was a matter of life and death, I ran back to the house to wake up my husband and children. I knocked and alerted our neighbours. The floods and stones are coming to kill us,” says Masika, 34, Ugandan woman, tells the Guardian.*

### 1.1 INTRODUCTION AND BACKGROUND

South Africa as a whole, like any other part of the world, is not immune to natural disasters let alone its provinces and municipalities like Limpopo Province and Greater Tzaneen Local Municipality. The two most severe, common and observable events in terms of natural disasters in these two areas are floods and droughts. Incidences of meteorological events such as tropical cyclones, tornadoes and extreme rainfall are also not rare. In support of the above observation, the National Disaster Management Centre (2017-2018) reports that South Africa is more likely to be faced with a wider range of natural hazards which lead to floods, major fires, tornadoes and even earthquakes (South Africa, 2017a). Moreover, it is reported that the foundation of disaster predicaments is climate change, which is responsible for the uncontrollable weather conditions globally (Downing & Dow, 2006; Green, 2009; Intergovernmental Panel on Climate Change [IPCC], 2008; Winker, 2010; Shokane, 2017). On the same wavelength, Wallemacq and House, (2018) reported that climate-induced disasters reckoned for about 90 percent of the 7,255 major disasters between 1998 and 2017, most of them floods and storms. Compounded by rising global temperatures, climate-induced disasters will become more recurrent and severe, endangering human lives and their livelihoods and putting economic assets at risk (IPCC, 2018). To this end, the uncontrollable weather conditions have put vulnerable people at high risks of natural disasters such as tropical cyclones and draughts irrespective of their locations on the globe. Their vulnerability is linked to different social ills ranging from poverty to homelessness. In most instances, people in rural areas, due to their abject poverty and high unemployment rate, which result

in their inability to afford house insurance, natural disasters render them homeless and to depend on government for relief.

Given the adverse impact of natural disasters, people in developing countries, including South Africa, are more susceptible to the rampage of natural disasters. Their vulnerability is due to, amongst others, poor drainage systems, lack of warning systems and poor infrastructure. Hence, Rock and Corbin (2007) predicted that by 2025 half of the people living in developing countries will be affected by storms and floods. Recent natural disasters are evidences of the truth this assertion. Largely, the most affected people in developing communities are those living with disabilities, children and women. Their vulnerability comes as result of violence occurring in temporary accommodation provided during natural disasters. In support, Drolet, Dominelli, Alston, Ersing, Mathbor and Wu (2015) indicate that during evacuation, due to lack of information, women may be placed in shelters that are not gender sensitive and thus become prone to violence. This points to the fact that during natural disasters, people are often removed from one location to another without considering gender difference. This mistake exposes women to violence and/or rape.

Woods (2014:96) indicates that “for disaster management, social work is well located at the nexus between governance and communities so as to promote and facilitate resilience which is now embedded in national disaster management policy.” The challenge is that rural communities do not have enough resources to deal with heavy rains or floods, let alone natural disasters. The only services available to them are of social workers. However, Chanza (2014:2) avers that “climate change discourages the collective knowledge, ingenuity and action of all stakeholders (including communities affected by climate change).” This points to the need to include community members, especially in developing countries and lower classes, in disaster management policies since they are the ones who are mainly affected by natural disasters.

Given the crosscutting nature of the negative impacts of natural disasters in communities, knowledge of climate governance should be holistic and contextual. A social worker cannot prepare local or African people for natural disaster without

understanding their local knowledge and decision-making skills about issues that they face. For example, local people rely on animals, plants and insects to predict heavy rains and storms (Hiwasaki, Luna, Syamsidik & Shaw, 2014) and seek protection from disasters by performing rituals to ward it off. Furthermore, Ellen (2007) has recognised that the combination of local knowledge and international knowledge can assist communities to be resilient during natural disasters. Again, the United Nation International Strategy for Disaster Reduction [UNISDR] (2005:9) recognises “traditional and indigenous knowledge and cultural heritage as a source of knowledge, innovation and education to build a culture of safety and resilience at all levels”. Integrating indigenous knowledge with western epistemologies can lead to successful disaster preparedness strategies and adaptability to climate change.

## **1.2 OPERATIONAL DEFINITIONS OF CONCEPTS**

It is imperative that concepts used in the study are defined within the context of the study so that the reader would be able to follow. Therefore, the concepts below will have the following meaning in this study:

### **1.2.1 Disaster**

Whether naturally occurring or induced by human beings or both, disasters can have devastating effects on the most vulnerable section of the population. Disasters can mean various things to different people. The Disaster Management Act 57 of 2002 defines a disaster as a disastrous event that occurs or threatens to occur (South Africa, 2002). On the same wavelength, UNISDR (2009:9) sees disaster as “a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope with its own resources”. Again, disaster is an accident or event that occurs and is beyond human control (Fahrudin, Baco, Abdul Malek, Haji-Yusuf, n.d). In this study, disaster will refer to natural disasters such as floods, droughts and hail winds that are likely and have occurred at The Greater Tzaneen Municipality.



## **1.2.2 Disaster management**

Some systems to mitigate and control disasters need to be put in place. Just like disaster, disaster management can mean various things to different people. The Disaster Management Act (57 of 2002) defines disaster management as a continuous and integrated multi-sectoral and multi-disciplinary process of planning and implementation of measures aimed at preventing or reducing the risk of disasters, mitigating the severity or consequences of disasters, emergency preparedness, a rapid and effective response to disasters, and post-disaster recovery and rehabilitation (South Africa [SA], 2002). In this study, this definition will be used in order to check how different stakeholders can work together to ameliorate the effects of natural disasters using African lenses.

## **1.2.3 Climate Change**

Climate change has devastating impact on individuals and leave devastating impacts on their livelihoods. The concept climate change bears different meaning to various people. The Disaster Management Amendment Act 16 of 2015 defines climate change as “a change in the state of the climate that can be identified by changes in the variability of its properties and that persists for an extended period, typically decades or longer” (SA, 2015). In addition, Rankoana (2016) sees climate change as the change in rainfall patterns. In this study, climate change will refer to the change in weather conditions that have a direct or indirect effect on the human activity in rural communities.

## **1.2.4 Indigenous Knowledge**

From time immemorial people have managed life and generated systems over time to control varying situations which assail them. Indigenous Knowledge (IK) refers to the knowledge used by local people to make a living in a particular environment (Warren, 1991; Langill, 1999). On the same wavelength, Johnson (1991) defines indigenous knowledge as knowledge used by indigenous people and passed from one generation to another. In this study, indigenous knowledge and Afrocentricity will

be used interchangeably with traditional knowledge as a knowledge used by local people in Greater Tzaneen Municipality to mitigate the effects of natural disasters caused by climate change.

### **1.2.5 Crisis**

From time immemorial, people have been exposed to various crises that had direct impact on the economy of their countries and threatened their psychosocial wellbeing. The word crisis has various meanings that differ from one person to another. Boin and Hart (2007) define crisis as a human-made undesirable event. Equally, Lin Moe and Pathranarakul (2006) define crisis as a situation that makes an individual, community and/or organisation to be unable to continue with their normal routines and which cause stressors. This study will adopt the definition of crisis by Lin Moe and Pathranarakul (2006) as the researcher will be looking at how communities, organisations, and individuals' normal routines are affected by natural disasters.

### **1.2.6 Vulnerability**

People, particularly those who are disadvantaged, are exposed to various crises and natural disasters due to unpredictable climatic changes and as a result become vulnerable. Vulnerability refers to “the combination of factors that determine the degree to which someone’s life, livelihood, property and other assets are put at risk by a discrete and identifiable event (or series or ‘cascade’ of such events) in nature or in society” (Wisner, Blaikie, Cannon & Davis, 2004:11). In this study, this definition is adopted because the researcher sought to understand how indigenous and local communities in rural areas become prone to natural disasters.

### **1.2.7 Small-Scale Farmers**

Small-scale farmers are seen as individuals in the community who are marginalised due to lack of accessibility to capital, technology, and assets. There is an ongoing debate in defining Small-scale farmers globally. For instance, United States

Department of Agriculture defines small-scale farmer as an individual who has a gross sale of not more than \$250 (Gouldthorpe & Goodwin, 2013), whilst, in South Africa, small-scale farmer is seen as a black person who does not have sufficient resources (capital and technology) for production (Shabangu, 2016). In Swaziland, a small-scale farmer is seen as a farmer who have less than two hectares of land and not having developmental resources (Kongolo & Dlamini, 2012). In this study, small-scale farmer refers to an elderly black farmer who resides at Runnymede village and practices farming with insufficient resources (capital and technology).

### **1.3 MOTIVATION OF THE STUDY**

Social work profession is a profession that cares for the wellbeing of individuals regardless of socio-economic status. The profession has a wider scope that focuses on wider range of challenges or impediments to human life. Thus, Rapeli (2017) enounced that social work is anchored on enhancing peoples' social wellbeing. Similarly, the National Association of Social Workers [NASW] (2012) and the International Federation of Social Workers [IFSW] (2012) document that social workers should advocate for the unfairly marginalised of vulnerable individuals, groups, and communities because of natural disasters. The researcher had a hunch to explore the nexus of social work and disaster management services using Afrocentric lenses with the view to make an impact to the most climate induced disasters in vulnerable communities. This is so because indigenous knowledge systems when coming to the issues of disaster management has been relegated to the periphery. Social workers should work with other stakeholders in order to assist the community to address the ramifications of natural disasters (Dynes, 2006; Henstra & McBean, 2010; Alexander, 2015). In most cases, during crisis or disaster, role players seem to be politicians while those who are supposed to safeguard the wellbeing of clients are distant. The researcher was also motivated by the fact that there is dearth of literature on the coalesce of the disaster management services, indigenous knowledge systems and social work services which could result in harmonised policies, programmes and services thereof.

## 1.4 PROBLEM STATEMENT

Competition between and among professions is as old as the professions themselves and the current situation regarding the systems and processes for disaster management and the provision of social work services are not interdependent or intrinsically dishevelled. Climatic changes brought unpalatable upshots in the form of natural disasters in the main. Over the past decades, the frequency and magnitude of natural disasters due to climate change have significantly increased (Cuadra, 2015). These frequencies have seen people losing their houses and loved ones due to poor warning systems. Among those affected or prone to being affected are the elderly, the children, and women. This view was later expressed by Maripe (2014:6), who discovered that the “elderly, sick, children and people living with disability” are prone to being affected by natural disasters. Their susceptibility is due to their physicality, sensory, and intellectual or mental health impairments during natural disasters. In support, Wells, Springgate, Lizaola, Jones and Plough (2013) discovered that the psychosocial impacts of natural disasters are not well recognised and have vast impacts on the wellbeing of individuals. The above view was affirmed by Kemp and Palinkas (2015), who assert that survivors of floods develop post-traumatic stress disorder, and depression; their social support is disrupted and their coping resources diminish. These pose threats their safety. In other words, the absence of social support for survivors of natural disasters create discomfort that leads them to depression. Interestingly, these (Africans) people have been brainwashed to disregard their indigenous knowledge systems, as the indigenous knowledge has been used over centuries to address variety of challenges. Indigenous knowledge has been downplayed and disregarded, perceived as uncivilised and barbaric.

South Africa has been affected by droughts and floods that exacerbated different social ills such as poverty, diseases, lack of shelter, lack of food production, and poor health as a result of climate change. Evidently, the National Climate Change Adaptation Strategy of 2017 avers that “floods, droughts, veld fires, heat waves and tropical cyclones affect the economy directly and indirectly” (South Africa, 2017b:72). Similarly, Porter et al. (2014) discovered that due to climate change, there is decline

in food production and increase in food prices. This affects the poorer households and those who are in rural areas as they have to reduce their food consumption and rely on food parcels. Several authors, including Sperling (2003), McCaig (2005) and O'Brien, Quinlan and Ziervogel (2009) have discovered that countries that are prone to natural disasters are also exposed to multiple stressors such as poverty, HIV/AIDS, and poor governance. South Africa is not an exception. Limpopo Province has experienced tropical cyclones, unpredictable rainfall and extreme weather conditions (Malherbe, Engelbrecht & Landman, 2013). The effects of tropical cyclones have been felt by the most vulnerable and rural people which affect their means of food production by destroying their fields and crops, resulting in food insecurity. In addition, the effects are felt when both communicable and non-communicable diseases including water-borne diseases and malaria become prevalent. In spite of the fact that the majority are Africans (black people) who are endowed with indigenous knowledge over centuries, little, if any, or nothing has been done to incorporate such knowledge in address challenges assailing them, including climate change induced disasters.

To address the effects of natural disasters, social workers and other stakeholders should collaborate in order to prevent and protect community members from its devastating effects. It, therefore, calls for the inclusion of indigenous knowledge systems when policies, programmes and services are developed and implemented. The challenge is that the involvement of social workers in disaster management and preparedness is not reported (Rapeli, 2017). However, earlier study by Syeda and Adnan (2016) reported that during disasters, social workers could, with the right resources, play the role of evacuators, medical assistants, client assessors, and crisis counsellors. The inclusion of social workers aligns with their mandate as prescribed by the National Association of Social Workers (NASW), which is, to prevent, protect and enhance the social wellbeing of individuals and communities. Moreover, NASW (1999) states that social workers should deliver service during public emergencies. In following the mandate from NASW, social workers should respond to natural disasters by providing counselling to victims who might be suffering from trauma in groups, community and individual engagement. Therefore, social workers are not the only key stakeholder, for the harmonisation of programmes and services regarding climate change induced disasters and

indigenous knowledge systems and social work services, officers in disaster management, traditional leadership, community members and other professionals should start collaborating for the benefit of the vulnerable communities, since they are working in silos.

## **1.5 AIM AND OBJECTIVES OF THE STUDY**

This section covers the study aim and objectives.

### **1.5.1 Aim of the study**

Having a clear understanding of the research aim paves way for choosing a desirable research design. Research aim refers to the overarching purpose or goal of the study. Within its wider spectrum, study aim is point detailed and de Vos, Strydom, Fouché and Delport (2011) opined that it is either exploratory, explanatory and descriptive in nature. On that note, the aim of this study was to explore and describe the nexus of social work services and disaster management services through an Afrocentric perspective.

### **1.5.2 Objectives of the study**

As research aim is in broader term, research objectives divide research aim into several parts and aid in attaining the research purpose. To Thomas and Hodges (2010), research objectives are statements that address specific issues that are linked to the long-term goal of the study. Moreover, the research objectives have to be specific, measurable, achievable, realistic and time-bound. With that in mind, the following objectives were developed to address specific issues that emerged from the problem statement:

- To determine the population vulnerable to natural disasters;
- To assess the social effects of natural disasters on community members (small-scale farmers);
- To determine challenges faced by community members (small-scale farmers) in the face of natural disasters;

- To identify challenges faced by social workers when dealing with victims and survivors of natural disasters;
- To establish how community members embrace and utilise indigenous knowledge in mitigating the effects of natural disasters; and
- To develop an integrated model on the interfacing of social work and disaster management services.

## **1.6 RESEARCH METHODOLOGY**

The baseline for the research project is grounded on the correct usage of research methodology. Thus, research methodology assists in the quest to provide organised, accurate, and desirable outcomes of the study. Research methodology refers to set of systematic techniques that researcher uses to guide his or her study, (Igwenagu, 2016). In essence, research methodology provides the theoretical understanding of the method to be used in addressing the specific case. The researcher in Chapter 6 discusses the research methods that were used to achieve the research objectives of this study.

## **1.7 SIGNIFICANCE OF THE STUDY**

The purpose of any research is to inform action; and without action and impact, the research is not worth conducting. Having identified the problem that gave rise to the purpose and the objectives of the study, the significance of the study became much clearer. Maillard (2013) affirmed that in considering the significance of the study, authors should reflect on what constructive and relevant contributions their study will make to their field of research. The author should reflect on the extent of the contributions made by the study to improve people's understanding, to change a concept, or to promote a new theory in a particular field of research. The significance of the study could be simply reflected by the following two questions: Why should my study be published? What significant scientific contribution is my study making to my field of research? The significance of the study should also be written with non-expert in mind. Therefore, for this study, Iravani (2005:265) avow that "natural disasters have enormous effects on the well-being of people and responding to them

is usually extremely complicated. People's relatives, friends and others close to them can disappear alongside their livelihoods, homes, hospitals, roads, transport, telecommunications networks and schools." These effects trigger various emotions such as fear, anger, and grief for community members. The victims of natural disasters approach social workers in order to be assisted to cope with the issue of loss and stress. To that end, community members receive holistic intervention from relevant social workers as social workers provide psychosocial support and assist the recipients to cope better and return to normal functioning after experiencing natural disasters.

Kamrujjaman, Rusyidi, Abdoellah and Nurwati (2017) aver that a social worker has to conduct research and risk assessments to be considered by policymakers for the provision of services. As such, this study will contribute positively to the field of social service as it will provide the guidelines and knowledge social workers need to prepare for natural disaster and help natural disaster victims. The findings will shed light on intervention strategies that could be used by social workers. It will influence academics in terms of curriculum development to train social workers to deal with clients during disasters. The findings will be disseminated through publication and feedback sessions will be conducted with the participants. As such it will influence policymakers, programme developers and curricular developers in the field of social work. Again, community members' indigenous knowledge in mitigating the effects of natural disaster will be considered during policymaking.

## **1.8 LIMITATION OF THE STUDY**

The study's findings are limited to N'wa-Mitwa, Runnymede Village and they cannot be generalised as practices in the Greater Tzaneen Municipality. The researcher did not generalise the findings as indigenous knowledge systems vary from one community to another. Moreover, the study was limited to small-scale farmers.

## **1.9 STUDY OUTLINES**

### **Chapter 1: General Orientation of the study**



The researcher orientates the reader to the study and lay a firm foundation for the formulation of problem statement, objectives that address the problems raised from the problem statement. In this chapter, the researcher also brings the reader the importance of this study in the social work education.

### **Chapter 2: Theoretical framework analysis**

In this section, the researcher states the theories that guided this study. The theories that guided this study were Afrocentricity Theory, Vulnerability Theory, and Resilience Theory. However, before giving analysis of the abovementioned theories the research lays a foundation on an analysis of the difference between meta-theory and theory.

### **Chapter 3: Legislative framework**

In this section, the researcher brings the reader closer to legislative frameworks that align with disaster management. As this study is executed in social work field, the researcher also gives a glimpse of frameworks that link social work to disaster management services.

### **Chapter 4: Indigenous knowledge systems and disaster management**

In this section, the focus is on the traditional knowledge that rural population use in addressing natural disasters. In this section, the researcher also distinguishes between western knowledge and indigenous knowledge.

### **Chapter 5: Environmental social work and climate change**

In this section, the researcher discusses eco-social work, and how climate change influences the environment. In conclusion, the researcher gives roles and function that social workers assume in their quest to provide social services.

### **Chapter 6: Research methodology**

In this section, the researcher shows what the research methods used to gather the data. This section gives detailed notes and justification of each method used in accessing the data.

### **Chapter 7: Presentation, analysis and interpretation of data**

In this section, the researcher presents the findings gathered from individual semi-structured interviews with social workers and focus group discussion with community members who do small-scale farming.

### **Chapter 8: Summary of findings, conclusions and recommendations**

In this chapter, the researcher draws summary of findings and provide the lesson learned as a take home from each finding. Moreover, the researcher, based on the findings and conclusion made, provides recommendation to influence future studies and policies.

### **Chapter 9: Development of integrated strategy on the interfacing of services**

In this chapter, the researcher provides the integrated strategy on the interfacing of social work and disaster management services. The research findings from the participants directed the researcher to develop an integrated strategy.

# **CHAPTER 2**

## **THEORETICAL FRAMEWORKS UNDERGIRDING THE STUDY**

*“We live in a world in which it is impossible to anticipate most of the contingencies that will arise. Neither the political context, nor the inventions, nor the fashions, nor the weather, nor the climate are precisely specifiable in advance. There is, in the real world, no possibility of working with an abstract space of all the contingencies that may evolve. To do real economics, without mythological elements, we need a theoretical framework in which time is real and the future is not specifiable in advance, even in principle. It is only in such a theoretical context that the full scope of our power to construct our future can make sense” says Lee Smolin*

### **2.1 INTRODUCTION**

This chapter seeks to present the theoretical frameworks that undergirded this study. According to de Vos et al. (2011:37), a theory attempts to explain and/or predict a particular phenomenon. In executing this study, the researcher triangulated three theoretical frameworks namely: Afrocentricity, Vulnerability, and Resilience Theories to explain the nexus of social work services and disaster management services. Ndenje-Sichalwe (2010) defines theoretical triangulation as the use of more than one theoretical framework to interpret data. To start with, the Afrocentricity Theory was adopted to analyse and interpret strategies that local and traditional communities use in responding to natural disasters. Secondly, the Vulnerability Theory was employed to analyse or draw a precise picture on why certain communities become vulnerable to natural disasters as compared to others. Lastly, the Resilience Theory was followed to analyse and interpret how traditional communities bounce back to normality after experiencing perturbations in form of natural disasters. The tenets, underpinnings, and philosophy of the theories used in this study are discussed in the forthcoming sections.

## **2.2 THEORETICAL FRAMEWORK ANALYSIS**

Theoretical frameworks are lenses that researchers and practitioners use to see particular problems; it is also befitting for this study to be guided by theoretical frameworks. Miles and Huberman (1994) found that there is a common mistake that researchers make when they construct their thesis and it is the believe that theoretical framework and conceptual framework can be used interchangeable. Seemingly, the conceptual and theoretical are synonyms; however, they bear different meaning in research. According to Miles and Huberman (1994:440) conceptual framework “lays out the key factors, constructs, or variables, and presumes relationships among them”. In the same vein, Luse, Mennecke and Townsend (2012) aver that a conceptual framework gives the researcher the opportunity to specify and define concepts within the research problem. On the other hand, Eisenhart (1991:205) postulates that theoretical framework refers to “a structure that guides research by relying on a formal theory constructed by using an established, coherent explanation of certain phenomena and relationships”. Similarly, Grant and Osanloo (2014) posit that theoretical framework refers to the existing theory that have been tested and verified by other researchers or scholars in literature. In line with the definition of Eisenhart and Grant and Osanloo, theoretical frameworks incorporate the existing selected theories that strengthens the researcher’s understanding of how the selected theories, concepts, and definition are related with the research topic. In other words, theoretical framework is a blueprint and uses the already existing theories to explain a certain phenomenon whereas the conceptual framework uses metatheory. Even though, this study used theories, it was worth making a clear description of these two concepts, metatheory and theory.

### **2.2.1 Meta-theory**

Generation of assumptions about and description of what a particular theory for a particular study is are crucial. Metatheory essentially concretes the path for the practical theories that the researcher is probably to construct and/or validate the existing one, the empirical research that the researcher is possibly to embark on by

depicting an existing theory, framework, model, approach or hypothesis or the field that the researcher is possibly to impact on. Metatheory is “what lies beyond or outside any substantive theory, empirical research, or human practice” (Fleetwood & Ackroyd, 2004:1). According to Wagner and Berger (1985) and Vakkari (1997), metatheory is a philosophy behind a theory. In other words, metatheory is seen as a framework used by a researcher to bring about meaning to how people understand, describe, influence and view the world using their concepts and philosophy. In accord with this view, Hjørland (1998) sees metatheory as a broader framework that is conscious behind theoretical, empirical and practical work. Later in the 20<sup>th</sup> century, Hjørland (2005:5) rephrased his explanation of metatheory and defined it as “theory about the description, investigation, analysis or criticism of the theories in a domain, and may also be termed, paradigms”. Again, Wallis (2010:78) sees metatheory as a “the study of theory, including the development of overarching combinations of theory, as well as the development and application of theories for analysis that reveal underlying assumptions about theory and theorizing.” In its nature, metatheory shapes the goal, expectations and actions of those who use it. The above authors might have different ways of explaining metatheory, but they agree that metatheory is a philosophy behind theory that is guided by the concepts and philosophy of the phenomenon under study.

It is worth noting that other authors define metatheory as a paradigm, which proves the assertion shared by Kuhn (1996), who articulated that other authors when explaining metatheory, overlap to paradigm. In clarifying the confusion of metatheory, Kuhn (1996) explains that paradigm is an umbrella concept that consists of metatheory, theory and methodology. In other words, paradigm has a broader explanation than metatheory, and metatheory is the core of each paradigm. The meta-theory of this study will be interpretivism due to its ability to understand individuals and meaning that those individuals attach to their environment and how they view the world (Broom & Willis, 2007). In addition, Thanh and Thanh (2015) and Kivunja and Kuyini (2017) aver that the main goal of the interpretivist is to understand individuals and make sense of their world and their interpretation of the environment that they live in.

## **2.2.2 Theory**

Theory or theories are set of ideas that are intended to explain a phenomenon. Theories are imperative as they provide the researcher with an understanding of certain events, behaviour and situation. Hence, White, Klein, and Martine (2002) define theory as a set of ideas that are used to explain a phenomenon. Moreover, during a public lecture at University of Western Cape, Sunday (2017) defined a theory as a framework used by researchers to see and understand the world around them. Regardless of different authors' explanation of theory, the authors concur that theory is used to understand and explain a certain phenomenon, situation and/or behaviour. The importance of theory in a study is that it has the ability to connect a single study to the immense contributions of previous researchers or scholars.

There are three levels at which the researcher can operate a theory. These include micro-level theory (which is used to explain individual's behaviour towards natural disasters), meso-level theory (to explain the kind of interaction individuals have with their communities and social institutions) and lastly macro-level theory (to explain the behaviour of community members, inclusive of their gender, towards the ramifications of natural disasters). When one is theorising, it means one is organising different ideas and concepts in order to explain certain phenomenon. In this case, different ideas written by different theorists were used to explain how people respond, mitigate and resist the effects of natural disasters using their African lens as an overarching theory. However, Vulnerability and Resilience theories were also used to explain why African people become susceptible to natural disasters and how they previously resisted and currently resist the ramification of natural disasters.

## **2.3 AFROCENTRICITY THEORY**

Different authors take different positions in explaining the Afrocentricity Theory. For instance, Asante (1998:2) defined Afrocentricity as "placing African ideas at the centre of any analysis that involves African culture and behaviour". Moreover, Mazama (2003:5) sees the Afrocentricity theory as 'epistemological centeredness' which involves placing Africans as self-willed agents instead of objects of

investigations. On the same wavelength, Thabede (2008:233) sees Afrocentricity as a “perspective that allows Africans to be subjects of historical experiences rather than objects on the fringes of Europe”. Again, Pellerin (2012) sees Afrocentricity as a philosophical and theoretical construct in the discipline of African Studies where laws, generalisations, methodologies and theories are created. Moreover, Makhubele, Matlakala and Mabvurira (2018) aver that Afrocentricity is about affirming the local community’s cultural worldview in their environment. All the above authors use different words to define Afrocentric or Afrocentricity theory. However, they all point out that the Afrocentricity Theory emphasises issues that involve African populations to be studied using African lenses.

Thabede (2005:35) and Asante (2009:1) postulate that the Afrocentricity Theory ask questions such as: "Does this place Africans in the centre? Is it in the best interest of African peoples? What would African people do if there were no white people?". Hence, in this study, the researcher sought to shift paradigms by placing African people at the epicentre of explaining their circumstances using Afrocentric lenses. The focal point in this study was to answer to the question; “how would African people address the issue of natural disasters and climate change?”. In answering this question, the use of the Afrocentricity Theory underpins that African people should be the ones to answer it within their context, thereby removing western knowledge systems from the centre of African reality.

The knowledge base in social work education mirrors European philosophy when addressing issues that affect Africans (Makhubele, Mabvurira & Matlakala, 2018). This demonstrate that social workers’ intervention and assessment of the environment of indigenous community members are Eurocentric instead of Afrocentric. The latter author’s view reaffirmed the views held by Thabede (2005:35) who insisted that Africans should view phenomena from the “vantage point of an African world-view, which, in turn, is informed by African culture.” In this study, the researcher had to understand the socio-cultural factors that lead community members to reside in areas that are prone to natural disasters. The understanding of the socio-cultural factors that make rural communities to reside in disaster prone areas assist in development of social work intervention model that will be infused with local knowledge (Thabede, 2008).

Mabvurira and Makhubele (2018) believe that the exclusion of indigenous knowledge has created problems in social workers' intervention when assisting indigenous people in rural areas. In other words, social workers tend to forget that clients should be the change agent of their own challenges by using their African ways. In support of this, Shokane and Masoga (2018) and Makhubele et al. (2018) believe that acknowledging that indigenous people possess the ability to assist social workers to render much-needed service and improve or develop social work intervention models. To that end, the researcher was guided by the tenets of the Afrocentricity Theory and engaged indigenous knowledge systems holders (in the name of community members) to solicit information on how rural populations adopt and respond to effects of natural disasters.

### **2.3.1 Relevance of Afrocentricity Theory to the Study**

Natural disasters are not a new phenomenon. Local people of ancient times have not been immune to natural disasters. They have relied on their traditional warning signs to prepare and respond to the rage of natural disasters. It is for this reason that in Africa, as Nyong, Adesina and Elasha (2007) observed, traditional knowledge is used by local communities for survival in the wake of natural disaster. This was broadened by Shaw, Takeuchi, Uy and Sharma (2009), who wrote that for centuries, indigenous people have been using their indigenous knowledge to sustain, manage and reduce harm in their environment. Supporting the above authors view, Jones (2012) states that social workers and disaster management authorities either aligned or overlooked local strategies in preventing, resisting, adapting, preparing, mitigating and recovering from the ramifications of natural disasters. The Afrocentricity Theory helped the researcher to close the gap and relook at indigenous strategies that local communities use in addressing ramifications of natural disasters. This was built on the view of Hiwasaki et al. (2014) who postulated that the indigenous knowledge of indigenous communities can contribute significantly in disaster risk reduction, save human lives and property from the ramifications of natural disasters. In corroboration, Iloka (2016) and Rahman, Sakurai and Munadi (2017) reported that countries that adapt, resist, and recover from natural disaster have adopted



indigenous strategies of local communities. For instance, local people relied on animals to predict natural disasters. In support, earlier study by Kamara (2005) found that the change in bird's cries indicate the change in seasons, and high birds' nests near a river predicts floods. However, disaster risk reduction in South Africa using indigenous knowledge remains understudied and this study sought to close the gap and contribute to the broader knowledge.

Over and above, the relevance of Afrocentricity theory in this study is justified by the fact that the most vulnerable to the impact of natural disasters are African in rural areas who lack access to modern infrastructure and technology (Noyoo, 2007; Maponya & Mpandeli, 2016; Nyahunda & Tirivangasi, 2019). Moreover, the theory resonates well with the purpose of this study as it explores and describes the nexus of social work services and disaster management services through an Afrocentric perspective.

## **2.4 VULNERABILITY THEORY**

The Vulnerability Theory provides an assessment of why certain individuals and communities are prone to natural disasters. Wisner, Blaikie, Cannon, and Davis (2004) state that vulnerability theory provides an understanding of the casual chains of natural disasters. Wisner and colleagues further assert that the Vulnerability Theory recognises that certain individuals and communities are more prone to natural disasters compared to others (Wisner et al., 2004). For example, rural communities are vulnerable to natural disasters because of lack of infrastructural resources such as good houses, and community halls and/or poor technology devices for disaster preparedness, rescue, planning, and recovery.

The Vulnerability Theory was used in this study to understand communities and individuals that were susceptible to disasters. According to McEntire (2005), the Vulnerability Theory has the ability to generalise the effects of disasters in respect of populations and socio-cultural contexts. Also, Zakour and Gillespie (2013:10) posit that "the emerging theory of vulnerability not only draws on traditional methods of disaster mitigation, preparedness, response, and recovery but also expands the

boundary of disaster by fusing with other areas such as environmental sustainability, terrorism, and social development". As a result, this theory acknowledges that the indigenous knowledge should exist alongside western knowledge in mitigating the effect of natural disasters on vulnerable groups.

Wisner et al. (2004) postulate that the greater understanding of socio-environmental factors (as the risk factors to the reoccurrence of natural disasters) are the key components of vulnerability theory. In corroboration, Oliver-Smith (2004) and Zakour (2010) wrote that understanding the social, cultural, political and economic causes of disasters helps in providing intervention strategies that could reduce the vulnerability of community to disasters. On the same note, Gillespie (2008a, 2008b) believes that people in rural community might be unable to stop natural disasters from occurring but they could reduce their vulnerability to the effects of natural disasters. Hence, Gillespie (2010) wrote that at the core of vulnerability theory is how to reduce community's likelihood of being vulnerable to disaster and foster the rapid recovery of communities after disasters. In other words, the understanding of the community that one serves helps in identifying and understanding resources that are needed in the community and those that are available but not utilised. As such, the researcher believes that the ability of communities to reduce their vulnerability to disasters positions to suffer minimal loss of production and livelihood and increases their likelihood to recover rapidly after disasters.

The United Nations International Strategy for Disaster Reduction [UNISDR] (2009) posits that natural disasters have an effect on the development of the community. In essence, resources that could be used to develop the community are used to rebuild infrastructure that was destroyed by natural disaster. To that end, Zakour (2010) found that poor populations are more vulnerable to disasters compared to well off populations. This is because people in rural areas lack essential resources for early warnings about disasters. In support of the above assertion, Zakour and Gillespie (2013:12) wrote, "low-income communities are generally vulnerable to disasters due to their limited access to resources". When these vulnerable communities experience natural disasters, their property is affected and so is their food production.

Moreover, people in rural areas also have poor drainage systems and old buildings which are occupied by elderly and children. This assumption was supported by Zakour and Gillespie (2013) who observed that most rural people reside in unsafe areas that make them susceptible to natural disasters due to their inability to afford townhouse. Moreover, development in rural areas is unlikely to occur because the elders are not knowledgeable about technological facilities that predict natural disasters and this leaves them to depend on their indigenous knowledge to predict natural disasters. However, due to their age, they tend to be immobile and unable to move even after they have predicted natural disasters.

### **2.4.1 Developmental Causes of Vulnerability**

In 2004, Wisner and colleagues developed a Pressure and Release Model (PAR) in order to portray the developmental cause of vulnerability (Wisner et al., 2004). Accordingly, Oliver-Smith (2004) reported that due to lack of development in rural areas, rural populations are unable to adapt to natural disasters that affect their infrastructure. Hence, Norris, Stevens, Pfefferbaum, Wyche, and Pfefferbaum (2008) suggested that communities need adequate and equal distribution of household and economic resources to avoid vulnerability to natural disasters. The following figures demonstrate the developmental cause of vulnerability, paying attention to the following points of focus: root causes, dynamic causes and unsafe conditions.

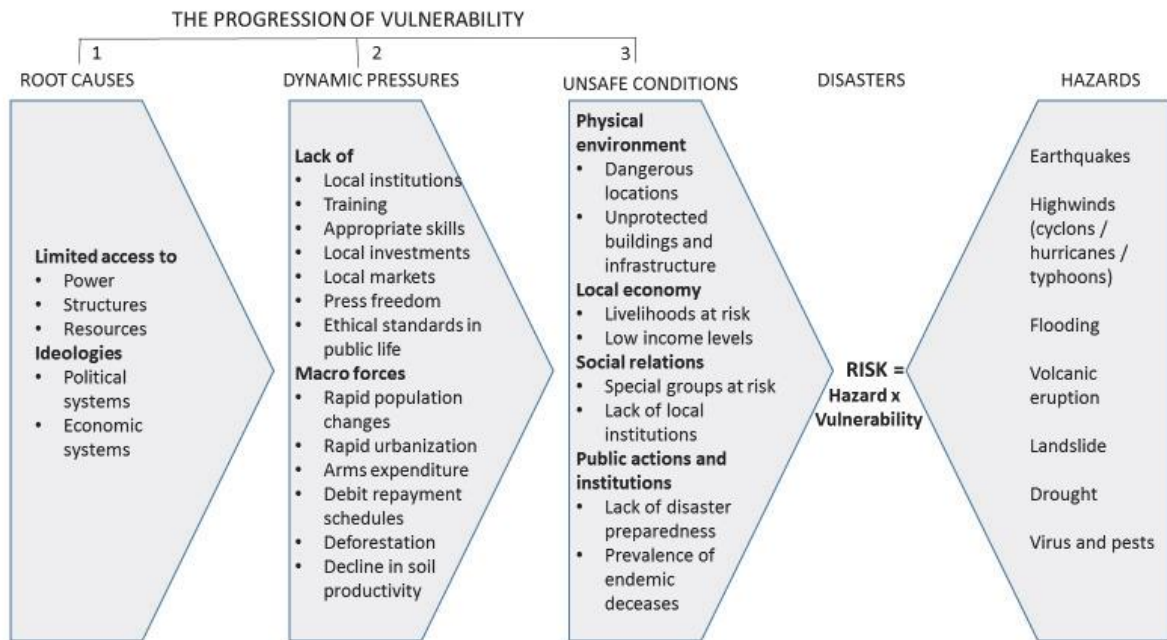


Figure 1: Pressure and Release (PAR) model

Adopted from Wisner et al. (2004:51).

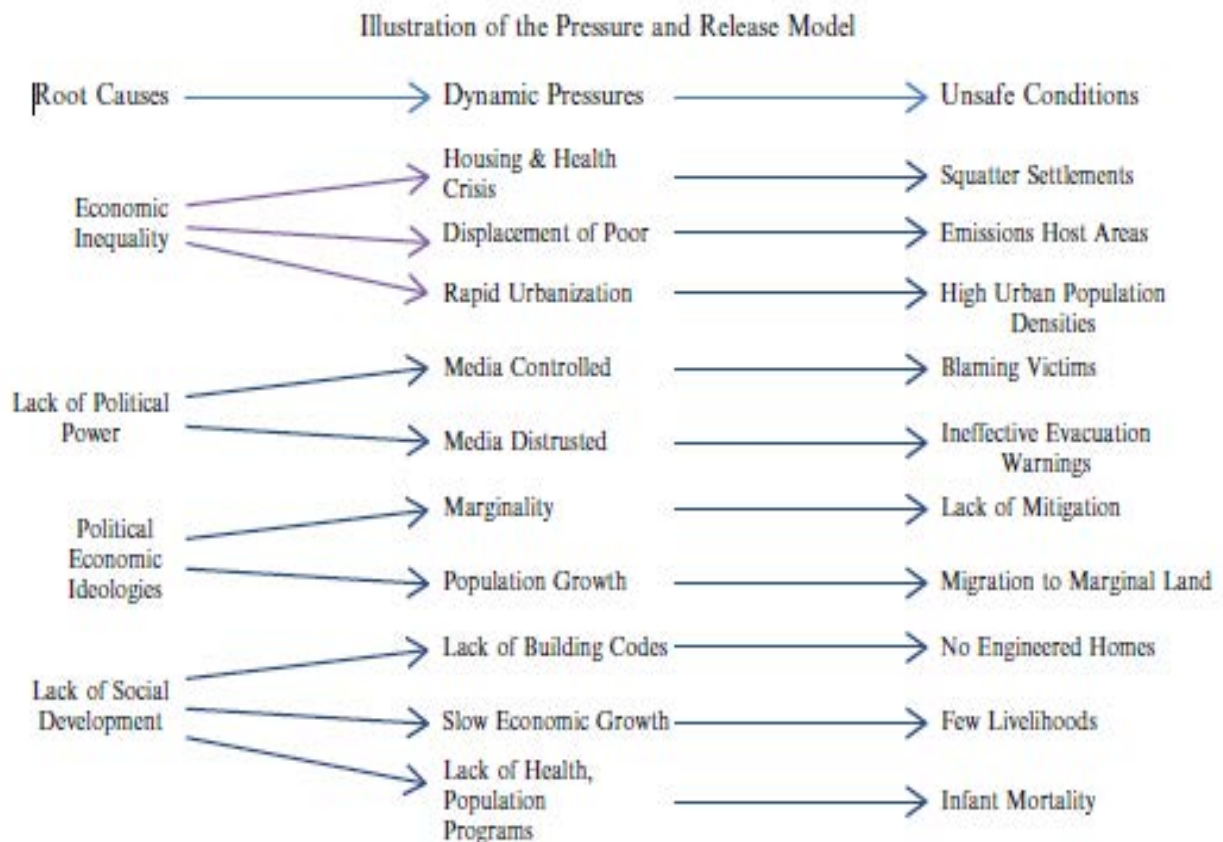


Figure 2: Illustration of the pressure and release model

Adopted from Zakour and Gillespie (2013:38)

- **Root Causes**

Vulnerabilities can be caused by different factors. According to Wisner et al. (2004), the root causes of vulnerability emanates from limited resources in rural communities. In corroboration, Collins (2008a, 2008b) has noted countries that are less developed are more likely to be vulnerable to natural disasters. In support of the above, the researcher underscored that with March 2019 cyclone Idai which had devastating effects on Zimbabwe, Mozambique and Malawi because there were not adequate early warning systems compounded by poor infrastructure and underdevelopment of those countries. This assumption is supported by Zakour and Gillespie (2013:42) who aver that “the rootcauses of the Bangladesh and Mozambique disasters in 2009 stemmed partly from limited access to land, lack of infrastructure, and prejudice against the minority groups”. In South Africa, areas that are prone to natural disasters, such as Nkowankowa, Naphuno and Lenyenye community in Tzaneen Municipalities (Lowfield areas), mostly consist of the minority population. As such, their poor socio-economic background exposes them to natural disasters such as floods. Moreover, the minority population are in most cases unlikely to afford house insurance, which means they cannot be compensated for their lost property during floods and/or lessen their chances to be resilient to natural disasters. This assumption was supported by the study conducted by Peacock and Girard (1997) who pointed out that those communities in Miami and Florida were susceptible to disasters, and lost their possession as they failed to insure their infrastructure or their belongings.

- **Structural or Dynamic Causes**

Structural or dynamic causes, according to Wisner et al. (2004), looks at the socioeconomic status and gender roles that contribute to community susceptibility to natural disasters. It also builds on the root causes that were discussed above as it avers that individuals from lower class are unable to protect themselves from disasters as compared to those in the upper class (Zakour & Gillespie, 2013). In terms of gender roles, it recognises that during natural disasters women are exposed

to various forms of violence especially during evacuation. In support, Drolet, Dominelli, Alston, Ersing, Mathbor and Wu (2015) indicate that during evacuation, due to lack of information, women may be placed in shelters that are not gender sensitive and thus become prone to violence.

- **Unsafe Conditions**

Unsafe conditions refer to the environment where people live that is susceptible to disasters. In most cases, unsafe areas lack technology that can be used to prepare and warn people before the eruption of natural disasters. Kreimer, Arnold and Carlin (2003) recorded that in rural areas, there is inadequate public action and institutions such as poor warning systems, exclusion of rural areas from mitigation projects, purposive flooding of rural areas to protect more densely populated cities, and lack of property insurance. As already mentioned, people who reside in rural areas are from lower class and they do not have means to afford adequate insurance that will enable them to be resilient to natural disaster disasters. On the other hand, Zakour and Gillespie (2013:47) reported that “floods cause waterlogging in and around homes and increase disease vectors such as mosquitoes carrying malaria”. As such, rural population during disasters are dealing with numerous factor such as losing their loved ones and property, and those who survive are also likely to contract malaria during floods.

## **2.4.2 Social Work and Vulnerability Theory**

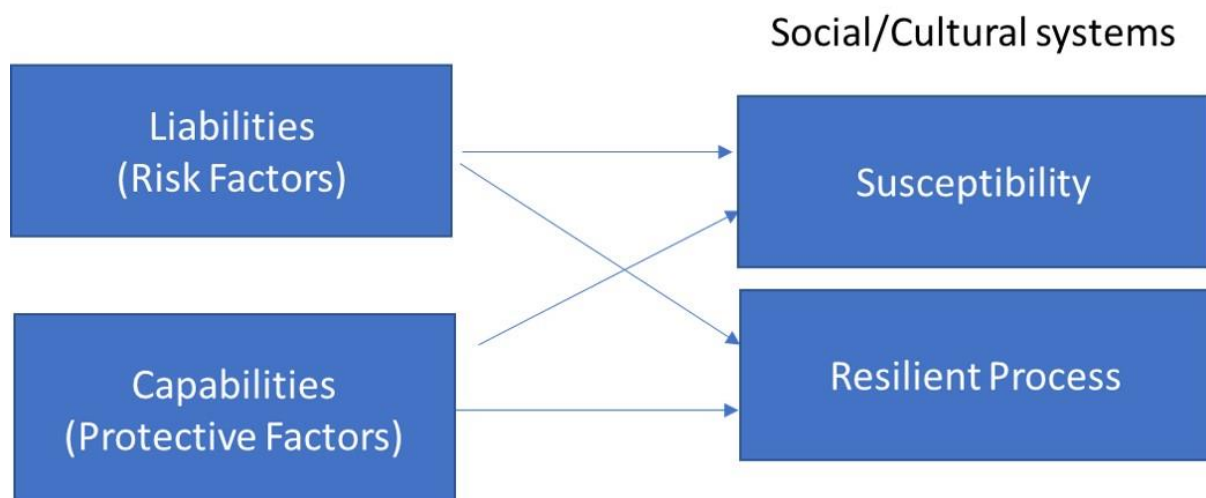
In spite of it being a soft profession, Social Workers find themselves serving people who are victims of vulnerabilities. According to Zakour and Gillespie (2013:12), “social work research, education, and practice have important roles to play in understanding disasters and reducing disaster losses”. This is because social workers are mainly the agents that deal with the vulnerable groups and understanding the cause of natural disasters will inform their intervention models/methods. Zakour and Gillespie (2013) further contend that the involvement of social workers in natural disasters is due to the fact that natural disasters cut across professions such as social work, sociology, anthropology and geography. Thus, this

calls for the integration of systems or disciplines to address the effects of natural disasters in communities.

Zakour (2010) reported that people with mental disorders and young children are susceptible to natural disasters. People living with mental disorder are vulnerable to natural disasters because they have lost touch with reality and they cannot react with urgency when community members evacuate. In South Africa, the low-income communities, including elderly, mentally challenged individuals, children and females are prone to disasters and that is where social workers should intervene. In support, Zakour and Gillespie (2013:13) reported that populations served by social work are more vulnerable in part, not only because of the unequal distribution of the resources needed for disaster resilience, but also because of poor understanding about how to use what they have to maximize safety. As such the researcher has observed that in South Africa, service was not equally distributed, hence, there was lack of development in rural areas as compared to urban areas. In addition, rural community members did not have luxury of technology and even if they did, they did not understand technology warning systems.

### 2.4.3 Liabilities and Capabilities

The following figure shows the relationship between liabilities and capabilities in vulnerability theory.



*Figure 3: Relationship between Liabilities and Capabilities*

*Adopted from Zakour and Gillespie (2013:57)*

- **Liabilities**

Liabilities refers to the risk factors of natural disasters. Evidently, Wisner et al. (2004) aver that liabilities are the root cause of vulnerability to natural disasters. Moreover, Bolin (2007) has observed that in developing communities, vulnerability to natural disasters is due to of unemployment, substance abuse, poverty, violence, homelessness and mental illness. The aforementioned social ills expose individuals to other psychological challenges such as trauma after losing loved ones and destruction of property, infrastructures, and other assets essential for human survival.

Furthermore, McEntire and Mathis (2007) argue that colonisers are the reason people in rural community are vulnerable to natural disasters. This was later affirmed by Zakour and Gillespie (2013), who wrote that in Africa the vulnerability of rural communities to disasters are as a result of colonialism. Equally, the researcher has observed that in South Africa, the land crisis in rural areas lead most families to build their houses next to the river banks and low field areas while others resided in natural disasters prone areas because it is their ancestors land.

- **Capabilities**

Capabilities refers to resources available in the community to assist in dealing with the effects of disasters. As such, McEntire and Mathis (2007) reported that developed communities' experiences of the effects of natural disasters are less as compared to the developing communities'. This was supported by Zakour and Gillespie (2010) who wrote that the environment is blessed with social capital that could be used to assist the community to respond to the rampage of natural disasters. Furthermore, Zakour and Gillespie (2013:22) aver that capabilities include "(a) access to services; (b) availability of responsive client-centred services including case management, case finding, case advocacy, outreach, brokering, and referral; (c) a sufficient number of disaster services organizations with adequate capacity, including sufficiently paid staff, trained volunteers as appropriate, and regularly



updated disaster plans; and (d) disaster mitigation (prevention), preparedness, response, relief, and recovery organizations with a high level of organizational coordination". In terms of capabilities, emphasis was on the ability of community members to receive social relief during and after natural disasters and also the involvement of social workers to advocate for the affected community members who were denied services. Again, the capabilities look at contingent plans in place to assist community members prepare and respond to natural disasters should they strike again.

On the same note, McEntire and Mathis (2007) propound that the developed communities' experiences of the effects of natural disasters are less compared to the developing communities. This was supported by Zakour and Gillespie (2010) who wrote that the developed communities' environment is blessed with social capital that could be used to assist the community to respond to the rampage of natural disasters. In South Africa, the researcher observed that rural communities lacked essential resources for disaster response and recovery. It is for this reason that the researcher believes that the urban populations had better capabilities compared to the rural areas. In addition, Zakour and Gillespie (2013) wrote that United States of America (a developed country) has a better response strategy and resources for dealing with the effects of natural disasters than other undeveloped communities. For example, in 2019, South Africa, Zimbabwe, Mozambique and Malawi (developing countries) were affected by unpredictable weather condition and Cyclone Idai respectively due to lack of resources and essential techno-based infrastructures for disaster response and mitigation.

#### **2.4.4 Causes of Vulnerability to Natural Disasters**

There are various factors that cause individuals to be vulnerable to natural disasters. In this study, the researcher focused on gender inequalities, socio-economic status, and illiteracy as factors contributing to vulnerability.

#### **2.4.4.1 Gender inequalities**

In 2003, the World Health Organisation released a report that estimated that women are 14 times more likely than men to die from natural disaster. This has led Mitchell et al. (2008) to specifically zoom in on the vulnerability of women to water scarcity. They found that due to long distances to from water, women are more likely to develop health problems because they bear heavy water containers on their head across long distances. This led ICIMOD (2009) to conclude that women are more vulnerable to the effects of drought compared to men. In agreement with the above, Goldsworthy (2010) reported that due to change in landscape and climate, women have to travel long distances in order to access clean water for livelihood. In corroboration, Nellemann, Verma, and Hislop, (2011) reported that due to lack of clean water and drought, women are faced with sanitation, health, and safety challenges. For example, women are vulnerable to rape in forests and are likely to fetch water contaminated with human faeces. Safety comes in for the fact that women travel alone to rivers through long distances in forests to fetch water. That makes them vulnerable to abduction and/or even rape. While women perceive water shortage as a challenge to their wellbeing, men consider water scarcity as a challenge for agricultural activities. This was supported by Nellemann et al. (2011) who reported that women are affected by water shortage by their need for it for household chores and sanitation while men need it for irrigation.

#### **2.4.4.2 Socioeconomic status**

Most of the people who are vulnerable to climate change are those marginalised due to their poverty and low socioeconomic status. This view was upheld by Dankelman (2002) who found that in the IPCC, women had a representative of 16%, and MacGregor (2010) reported that out of 146 national delegations that participated in 2019 UN Climate Summit in New York, only seven women were found at the helm in that summit. Women are less represented in these committees and summits and as such debates on climate change have been stereotypically masculinist. However, women are mainly affected by climate change due to their poor economic status. Thus, MacGregor (2010) reached a conclusion that, globally, 70% of women are poor and due to poverty they are excluded from decision-making on climate change.

The exclusion of women from policy making could be the result of the earlier study conducted by Shackley, McLachlan and Gough (2004) in the United Kingdom which captured the fact that men are better informed of climate change issues than women.

#### **2.4.4.3 Illiteracy**

Vulnerability of people to natural disasters can also be traced to poor comprehension of early warning signs. In 1998, Clark and his colleague made an assertion that the elderly, children, women, and those of poor socioeconomic status were more prone to natural disasters (Clark, Moser, Ratick, Dow, Meyer, Emani, & Schwarz, 1998). In expatiating, Masozera, Bailey, and Kerchner (2007) found that low-income people have difficulty in responding to natural disaster and recovering in the aftermath of it. Moreover, Yeh (2010) avers that unlike men, the elderly, children, and women's vulnerability is due to lack of physical strength to escape danger. This was corroborated by Frankenberg and her colleagues who found that older men and women were more vulnerable to death from natural disasters (Frankenberg, Gillespie, Preston Sikoki, & Thomas, 2011). The elderly's vulnerability is as a result of their inability to quickly evacuate from disaster areas as some need walking sticks to move.

According to Frankenberg, Sikoki, Sumantri, Suriastini and Thomas (2013), the vulnerability of women and men to natural disasters varies with education. Educated men cope better with the effects of natural disasters compared to their women. Frankenberg and her colleagues validate that gender difference is not what makes women more vulnerable to the effects of natural disaster but education. In their study, Frankenberg et al. (2013) found that educated women were more likely to survive tsunami compared to uneducated women. It could be deduced that the researchers based their finding on the environment where the existence of indigenous knowledge is not recognised. The researcher has observed that the lack of education of elderly women did not hinder their understanding of climate change. Nonetheless, the researcher does not discredit the view of the latter authors because with education, people learn that their property should be insured and that they should not build their houses in disaster prone areas.

### **2.4.5 Relevance of Vulnerability Theory to the Study**

The Vulnerability theory is important in this study as it sought to explore the underlying factors of the environment that makes the local community in rural areas vulnerable to destruction and natural disasters. Khan, Vasilescu, and Khan (2008:44) aver that “a disaster is a result from the combination of hazard, vulnerability and insufficient capacity or measures to reduce the potential chances of risk”. In most instances, the vulnerable population is found in areas that are prone to natural disaster. However, Thinda (2009) has observed that even when local people are vulnerable to natural disasters, they hardly receive support and/or resources. This theory is ideal as it helped the researcher to draw a conclusion on the vulnerability of rural communities regarding the landscape.

UNISDR (2011) reported that a huge amount was lost in Japan and Thailand due to Earthquake, tsunami and floods which were experienced in 2011. This demonstrated that the economy is vulnerable to the effects of natural disaster and development cannot be seen in communities, as new buildings have to be designed after natural disasters. Furthermore, Ciurean, Schröter, and Glade (2013) reported that natural disasters have direct and indirect impact on social service recipients. For instance, during floods people lose their loved ones (direct impact) and food production also suffers as crops are washed off by floods (indirect impact). This shows that local people are not only susceptible to loss or damage of poverty but they are also susceptible to poverty. The lack of involvement of social workers in assisting community members to adopt, manage, and resist the ramification of natural disaster will see social services recipients queuing up for food parcel.

## **2.5 RESILIENCE THEORY**

It is more essential to look at how people survived vulnerabilities overtime than to focus on their deficiencies. The resilience theory was coined out of the ecological theory in 1973 as scholars attempted to understand the ability of the environment to adapt and maintain change (Blaikie & Brookfield, 1987; Adger, 2000; Van der Leeuw & Leygonie, 2000; Stockholm Environmental Institute, 2004). However, Timmerman

(1981) and Janssen and Ostrom (2006) wrote that the Resilience Theory was used by ecological theorists to understand the interaction of individuals with their environment to maintain their social functioning after a change. Moreover, Daniel (2011) avers that the Resilience Theory was developed in order to understand the community's ability to bounce back to normality after experiencing disturbances in form of natural disasters. In other words, the Resilience Theory is best understood by how communities and individuals use the systems around them to deal with the experienced change in their environment. As such, Boon, Cottrell, King, Stevenson, and Millar (2012:384) reported that "resilience is used to understand the complexity of community-environment interactions and the complexity of change". This shows that resilience is attained through the understanding and relationship of individuals with their environment as well as the resources available to use for recovery after some shocks.

Masten, Best and Garmezy (1990:426) propound that Resilience Theory is anchored on three aspects namely, "(1) individuals who have experienced traumatic events but have been able to recover well; (2) persons who belong to high-risk groups but who have more favourable outcomes than expected and (3) persons who show positive adaptation despite life stressors". In essence, this theory looks at how those who experienced traumatic event bounce back to reality. On the same note, Nelson, Adger, and Brown (2007) wrote that the Resilience Theory provides an analysis of adaptation and response of systems during natural disasters and helps researchers in identifying appropriate policies for responding to natural disasters. On another note, Engler (2007) argues that the Resilience Theory helps researchers to explain some of the unexplainable ways in which people have overcome tragedies and traumas in their lives. In this case, the coping strategies that indigenous people use in mitigating the effects of natural disasters will be clearly interpreted by the Resilience Theory. Hence, most researchers use the Resilience Theory in qualitative research as it celebrates the indigenous knowledge and allows participants to share their knowledge in mitigating the effects of climate change (van Breda, 2018). The Resilience Theory enabled the researcher to find out ways in which indigenous people bounce back to normality after experiencing natural disasters. The Resilience theory also assess how individual and community resist natural disasters.

Masten et al. (1990) posit that the Resilience Theory puts emphasis on the individuals' social environment. As Gunderson and Holling (2002) suggest, the ability for communities to adapt to natural disasters depends on the amount of resources in their disposal. On that note, van Breda (2016) avows that the Resilience Theory is formulated out of the person-in-environment in that it assesses the resources that are within the reach of individuals that are essential to enhancing their social functioning. Additionally, Nyahunda and Tirivangasi (2019) report that the Resilience Theory emphasises strengths over problems and incorporates key contextual factors in its structure. The Resilience Theory acknowledges that the person's environment has potential impact in assisting an individual's to bounce back to his or her normal way of functioning. Furthermore, Resilience Theory assisted the researcher to understand the adaptation strategies indigenous people in rural areas used to cope with food insecurity, damage to property, and loss in production as a result of natural disasters. Hence, this study was conducted in traditional communities that have been exposed to natural disasters whereby lived experiences were shared in responding to the aftermath of natural disasters.

### **2.5.1 Individual Resilience**

The Resilience theory is in two-fold, firstly it looks at individual resilience and secondly at community resilience. According to Egeland, Carlson, and Sroufe (1993:517), resilience is described as the capacity for successful adaptation, positive functioning or competence, despite high-risk status, chronic stress, or following prolonged or severe trauma. In corroboration, Bonanno (2004) avers that individual resilience refers to the ability of individual to maintain health, psychological and physical welfare after experiencing natural disasters. During natural disasters such as cyclones, individuals are exposed to health challenges and others lose their loved ones. For example, others might contract malaria and/or cholera.

Several authors pointed out that individual's traits and social support contribute to the ability of individual to be resilient to change (Kobasa, 1982; Antonovsky, 1987; Cicchetti & Garmezy, 1993; Cowen, Wyman, Work, & Iker, 1995). On that note, Norris et al. (2008:133), propose four indicators of resilience as a manifestation of an

individual's adaptation: (1) absence of psychopathology; (2) healthy patterns of behaviour; (3) adequate role functioning at home, school, and/or work; and (4) high quality of life. In other words, individuals showing the above aspects after experiencing change in their life demonstrate the ability to adapt to the situation. Furthermore, to be resilient towards natural disasters, people need social support in order to help them face the situation in groups. The researcher has observed that, due to concept such as *Ubuntu*, community members assisted one another throughout hardship in order to prevent dealing with challenges alone.

When discussing the issue of resilience, one should bear in mind the influence of intrapersonal and environmental factors (Tusaie & Dyer, 2004). The environment influences the behaviour of individuals and in return the individuals influence the environment. If an individual perceives a situation as stressful and lacks support or resources in the community, he or she will likely not be able to adapt to the change. On that note, Boon et al. (2012:386) aver that resilience researchers must first empirically identify protective factors from multiple levels of influence (community, family, and individual) which might mitigate the negative effects of adverse life circumstances. Currently, the researcher has observed that rural communities due to shortage of resources, relied on community halls and neighbours (country and communities) during evacuation. These are the resources that protect Africans in rural areas from being susceptible to the effects of climate change.

### **2.5.2 Community Resilience**

After heavy flooding, community members are left with poor infrastructure and no property. The ability of communities to withstand such external shock on their social infrastructure is referred to as community resilience (Adger, 2000). According to Boon et al. (2012:387), community resilience takes three different forms: (a) the ability of a community to absorb perturbation; (b) the speed and ability to recover from the stressors; and (c) the ability of a social system to maintain a constant process of creating and recreating. This aspect points out that the ability of the community to resist, recover, and be creative helps the community to mitigate the effects of natural disasters.

Godschalk (2003:140) avers that “building a disaster resilient city goes beyond changing land use and physical facilities. It must also build the capacity of the multiple involved communities to anticipate and respond to disasters”. Moreover, several authors have reported that community resilience measures the readiness and the ability of the community to respond and adapt to the effects of natural disasters (O’Brien, O’Keefe, Rose, & Wisner, 2006; Berkes, 2007; Norris et al. 2008). Hence, the researcher was interested in the integration of different departments in mitigating the effects of natural disasters on vulnerable groups. Understanding those strategies that vulnerable groups use in mitigating the effects of natural disasters can be useful for policy development and implementation. Accordingly, Colten, Kates, and Laska (2008) posit that infrastructures found in the communities are well situated to assist community members to be resilient to natural disasters. In rural areas, community members use resources such as community school and public centres during the evacuation.

### **2.5.3 Relevance of Resilience Theory in the Study**

According to NRC (2011), a resilient individual and/or community is the one that through mitigation and pre-disaster preparation develop an adaptive capacity to maintain the imperative community functions and recover quickly when major disaster occurs. This theory was significant in this study as the researcher explored the resilience strategies adopted by individual and community members to prepare, adapt, and cope with ramifications of natural disaster. As DOTARS (2004); QRA (2011) and Productivity Commission (2014) point out, the importance of resilience is seen in the ability to rebuild and improve the community after the impediment of natural disasters.

Furthermore, the relevance of resilience theory is that it sees the community as a key idea to adaptive resilience. In Coles and Buckle’s (2004) view, adaptive resilience is acquired when the community participates in the recovery process using their knowledge. This view was broadened by Shaw, Mallick and Islam (2013:220) who wrote that “it is increasingly observed and agreed that a sustainable [disaster



risk reduction] activity is only possible when there is a strong involvement and commitment from the local institutions". This has led Field and colleagues to argue that the core of resilience theory is the ability to bounce back, adapt, and the drive to moderate or avoid harm on individuals (Field, Barros, Mach, & Mastrandrea, 2014). This demonstrates that community participation and involvement of different organisations in a community ensures the success of the implementation of adaptive resilience. To that end, the researcher used this theory to explore the involvement of different stakeholders in assisting social service recipient to resist and cope with ramifications of natural disasters.

## **2.6 CONCLUSION**

This chapter has covered the theoretical frameworks. In its approach, three different theories (Afrocentricity, Vulnerability and Resilience Theory) were used to dissect and shed light on the study. These three theories complement one another as it was evident that the vulnerable groups are prone to natural disasters and they use their traditional knowledge in order to be resilient to natural disasters. Due to their creativity, they are able to come up with strategies to adapt and respond to disasters. The next chapter will look at legislation frameworks.

# CHAPTER 3

## LEGISLATIVE FRAMEWORKS

*“I have been in the legislative branch and now the executive branch and in each case I felt it was important we use our constitutional responsibilities to the fullest.”*

*John Engler*

### 3.1 INTRODUCTION

This chapter seeks to discuss legislative frameworks that guide social work practice and disaster management service, and those include acts, policies, strategic documents, position papers, and disaster response strategies. Legislative framework is imperative in a study because they provided the researcher with the most important laws and policies that uphold the government to protect its citizens. In this chapter, The Constitution of the Republic of South Africa Act 108 of 1996 will set precedence in matters pertaining to natural disasters. Subsequently, Disaster Management Act 57 of 2002, National Disaster Management Framework, National Veld and Forest Fire Act 101 of 1998, White Paper on Disaster Management will expatiate on the role of government in mitigating the effects of disaster. Subsequently, White Paper for Social Welfare will also be discussed to demonstrate the relevance and/or the inclusion of social workers in disaster management. Again, other related pieces of legislations such as National Environmental Management Act 107 of 1998, National Health Act 61 of 2003, National Water Act 36 of 1998, Water Services Act 108 of 1997 and Municipal Finance Management Act 56 of 2003 will be discussed to show their roles before, during and after natural disasters.

## **3.2 INTERNATIONAL REGULATION AND POLICY REGARDING DISASTER MANAGEMENT**

There are several international regulations that aims at enhancing the resilience of countries and communities to disasters. In this section, the researcher discuss three policies, namely, Yokohama Strategy and Action Plan 1994, The Hyogo Framework 2005-2015 and Sendai Framework for Disaster Risk Reduction 2015-2030.

### **3.2.1 Yokohama Strategy and Plan of Action for a Safer World**

In 1994, the World Conference on Natural Disasters Reduction conveyed to discuss a plan of action in creating a safer world. During their discussion, they proposed Yokohama Strategy and Plan of Action for a Safer World (World Conference on Natural Disaster Reduction, 1994). The policy was created to due to the over-rising of loss of human and economic factors because of natural disasters. The conversion held the view that sustainable economic growth and sustainable development cannot be attained as long as many countries are susceptible to natural disasters. On that score, the policy emphasise the desired need to reduce disaster loss that tend to degrade the environment. In light of that, most developing countries are having a degraded environment due to the rampage impact of natural disasters. As such, those areas even to date cannot attain sustainable economic growth and/or development. The basis for the strategy of Yokohama Strategy and Plan of Action for a Safer World is that natural disasters continues to strike globally and thus have a dire impact on the economy of countries (World Conference on Natural Disaster Reduction, 1994). However, the strategy equally denotes that as much as natural disasters are beyond human control, natural disasters are caused by human activity. Some of those of human activities includes and not limited to, burning of coal in mines and carbon dioxide from cars which affects the ozone layer. It is for those reason, the this strategy enunciate that community members should recognise how their activity affects their environment and strengthen their traditional methods in an attempt to acquire new ways of preventing and reducing the effects of natural disasters.

### **3.2.2 Hyogo Framework for Action 2005-2015**

The Hyogo Framework for Action was established in a quest to build resilience of countries and/or communities in response to natural disasters. This framework provides strategies that can be adopted to reduce the vulnerability and risk of natural disasters and ways of building resilience of nation to disasters (World Conference on Disaster Reduction, 2005). The Hyogo Framework for Action equally acknowledges that some of the challenges posed by natural disasters is as a result of unplanned urbanization, under-development, environmental degradation and climate change. In most instance, communities found in rural areas are residing in areas that are under-development and lack of understanding of technology. The gap of this framework is the undermining of indigenous knowledge, as those in rural areas rely on their indigenous knowledge to be resilient from natural disasters.

### **3.2.3 Sendai Framework for Disaster Risk Reduction 2015 – 2030**

The Sendai Framework aims at building the resilience of countries and communities to natural disasters. This framework is the successor of Hyogo Framework for Action which is equally aimed at building resilience of nations to natural disasters (The United Nations Office for Disaster Risk Reduction [UNISDR], 2015). The Sendai Framework is based on four priority, namely; understanding disaster risk, strengthening disaster risk governance to manage disaster risk, and Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction. The priorities are explained below:

- **Priority 1:** Understanding disaster risk.

Concerning this priority, the framework advocates for policies and practices that will provide individuals with an understanding of disasters and its dimension of vulnerabilities. On that score, such knowledge can be used for pre-disaster risk assessment, mitigation and implementation of appropriate preparedness and response to disasters.

- **Priority 2:** Strengthening disaster risk governance to manage disaster risk.

The second priority highlights the importance of disaster risk governance at national, regional and global level. On that note, all the relevant stakeholders should have a clear vision, plans, guidance, and competence. In other words, those who form part of disaster risk governance should have the expertise for disaster preparedness and mitigation strategies for when disasters strike. In light of that, it is imperative to foster collaboration amongst relevant institutions and/or stakeholders.

- **Priority 3:** Investing in disaster risk reduction for resilience.

Since disasters occurs unplanned and abruptly, the framework emphasis on the importance of having funds readily available to deal with disasters. Having such resource will aid community to bounce back after experiencing natural disasters.

- **Priority 4:** Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.

On this priority, the emphasis is on ensuring that there is disaster response team is well equipped to response to disasters. One of the factor, which is raised under this priority, is to empower women and people with disability to be able to respond to disasters as they seen as most vulnerable to disasters.

## **3.2 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA ACT 108 OF 1996**

Every country has a constitution to guide how people relate to each other and the environment in which they live. The Constitution of the Republic of South Africa Act 108 of 1996 is the supreme law of the republic that provides the legal foundation and defines the structure of the government. The Constitution in Section 41 calls for the government to provide an environment that is healthy and safe for the citizen of South Africa (RSA, 1996). In the same vein, section 41, subsection 1, paragraph (b) makes a provision that the national, provincial and local spheres of the government should ensure the well-being of people of South Africa (RSA, 1996). The above sections bind the government to ensure that its citizens are well protected from

natural disasters. However, the researcher has observed that most of the population in rural areas dwell in unfriendly environment such as buildings under power-lines, or next to coal industry open to pollution, and dangerous to health. As such, it is the responsibility of social workers to be advocates and to challenge the social injustice experienced by the vulnerable groups.

Part A, Schedule A of the Constitution specifically puts the responsibility of disaster management on national and provincial sphere of the government (RSA, 1996). However, this is a challenge because natural disasters are harshly felt by the people in rural areas. Moreover, the researcher has noted with sadness that those in rural communities' experienced ramification of natural disaster due to lack of community development. The Constitution should also specify that the local government had responsibility in disaster management. for local government to participate in issues that are affecting them. Nonetheless, Section 156, subsection (4) attempts to devolve the responsibility by involving the metropolitan and district in disaster management plans (RSA, 1996). However, given the apartheid system in South Africa that made people to be despair of resources; local people in rural areas never participated in disaster management plans with their area social workers. The inclusion of social workers will help community members in accessing resources that they were inaccessible to them. It should be noted that social workers aim to enhance social welfare of community members.

### **3.2 WHITE PAPER FOR SOCIAL WELFARE**

The inclusion of social workers in disaster management can be seen in chapter 1 of the White Paper for Social Welfare which calls for access to social services either in the form of remedial, rehabilitative or restorative services. Specifically, section 4 recognise that communities should be provided with accessible social welfare (RSA, 1997a). It is worth noting that rural communities during natural disasters see their subsistence farming being affected. For instance, due to lack of water, rural communities cannot supply their families with food. As such, during and after natural disasters, social workers, with relevant resources at their disposal, should relief

victims of distress in order to protect their human dignity. This will also aid in addressing sustainable development goal of no poverty and zero hunger.

Furthermore, Section 3 of the White Paper for Social Welfare mandates social workers to aid sustainable improvements in the wellbeing of individuals, families and communities (RSA, 1997a). However, during natural disasters vulnerable groups are exposed to contaminated water, which could give birth to cholera and other diseases that wellbeing at risk. As such, given their training, social workers should be at the forefront to challenge social injustice and advocate for good health, education, housing, equal distribution of resources, and rural development for vulnerable groups.

### **3.3 WHITE PAPER ON DISASTER MANAGEMENT**

White Paper on Disaster Management sets out disaster management policy for South Africa. White Paper on Disaster Management advocate an approach that focus on reducing risks of losing life, economic assets and, property with special attention to those who are vulnerable groups (RSA, 1999). In other words, the social workers, with the aid of government, have the responsibility to ensure that citizens reside in safe environment and that their wellbeing is of paramount importance.

The White Paper on Disaster Management is based on the premise of protecting environment by integrating risk reduction strategy into existing and future policies, plans, and projects of national, provincial, and local government (RSA, 1999). The following are the objectives of the White Paper on Disaster Management:

- Provide an enabling environment for disaster management;
- Promote proactive disaster management through risk reduction programmes;
- Improve South Africa's ability to manage emergencies or disasters and their consequences in a co-ordinated, efficient and effective manner;
- Promote integrated and co-ordinated disaster management through partnerships between different stakeholders and through co-operative relations between all spheres of the government;
- Ensure that adequate financial arrangements are in place; and

- Promote disaster management training and community awareness.

In South Africa there are established fire fighter stations in developed areas and National Veld and Forest Fire Act 101 of 1998 outlines duties and responsibilities of fire fighter stations. This shows that the government attempts to ensure that they reach the above-mentioned objectives. Moreover, the White Paper on Disaster Management promote cooperation among different stakeholders and recognise that disasters are not only experienced nationally, but are spread throughout. Hence, it encourages national government to work with provincial and local governments to combat the effects of natural disasters.

### **3.3 DISASTER MANAGEMENT ACT 57 OF 2002**

South Africa is exposed to a wide range of natural disasters. As such, Vermaak and van Niekerk (2004) wrote that after the occurrence of floods in Western Cape Province in 1981, South Africa became the first country to legislate Disaster Management Act 57 of 2002. The Disaster Management Act aims to integrate and co-ordinate disaster management policy that prevent or reduce the risk of disasters and mitigating the severity of disasters (SA, 2002). The Disaster Management Act integrates different stakeholders such as social workers and other stakeholders to work together to prepare community members to deal with the ramifications of natural disasters. The challenge is that the act is not specific in terms of clarifying the concept of other stakeholders. As such, the involvement and/or participation of rural communities on indigenous resilience strategies and involvement of social workers is not stated.

Chanza (2014) wrote that indigenous people have traditional coping strategies that they use in response to floods and droughts. To that end, disaster management team, which is skewed to western approach, can learn a great deal from indigenous people on resilient and prevention strategies of natural disasters and vice versa. In the same vein, the exclusion of social workers in disaster management policies disadvantages the vulnerable groups as social workers are the voice of the voiceless and advocates for social justice. Social workers are well positioned to understand the



challenges that rural communities face after natural disasters as they are constantly engaged with clients or victims of natural disasters. In the ambiguity of Disaster Management Act 57 of 2007, section 7, subsection 2 and paragraph (e) makes a provision that different stakeholders should work in collaboration in order to ensure that they strengthen each other in dealing and addressing the effects of natural disasters (RSA, 2002). As such, the researcher is of the view that indigenous knowledge holders, social workers, and disaster management personnel should work together to contribute to new knowledge of resilience strategies and mitigation of natural disasters.

### **3.4 NATIONAL DISASTER MANAGEMENT FRAMEWORK**

National Disaster Management Framework (NDMF) is a policy that provides a coherent, transparent and inclusive policy on disaster management for the citizen of Republic of South Africa (NDMF, 2005). The National Disaster Management Framework was developed in order to enforce sanctions stipulated in Disaster Management Act. In its premises, NDMF recognises the wide diversity of natural disasters that are experienced in South Africa. This policy recognises that South Africa is prone to natural disasters such as floods, droughts, and heat waves.

The national disaster management framework comprises four key performance areas (KPAs) as outlined by NDMF of 2005:

- Key performance area 1

KPA 1 puts emphasis on establishment of necessary institution for implementing disaster risk management within the national, provincial and municipal spheres of the government. Different stakeholders are urged to work in collaboration to strengthen the capabilities of national, provincial and municipal government to reduce the likelihood and severity of natural disasters.

- Key performance area 2

KPA 2 puts emphasis on risk assessment, reduction, and monitoring of the effectiveness in the Republic's effort to reduce and respond to the effects of natural

disasters. In terms of KPA 2, disaster risk refers to the hazard or natural disasters that have the potential to cause harm or loss of either property or life. As such, the KAPA 2 mandates the government to implement disaster risk assessment in local, provincial, and national spheres.

- Key performance area 3

KPA 3 focuses on planning and implementation so as to inform the type of development needed to reduce the impact of natural disasters.

- Key performance area 4

KPA 4 emphasises that disaster response, recovery, and rehabilitation should be prioritised during the ramification of natural disasters. In this key performance area, collaboration which different stakeholders is emphasised. KAP 4 acknowledges that during and after experiencing natural disasters, members in the community need counselling so that they could recover the loss occasioned by natural disasters. Equally, when an event is likely to occur, community members need to be taught and/or orientated to respond to the ramification that could be coupled with natural disasters.

## **3.5 NATIONAL VELD AND FOREST FIRE ACT 101 of 1998**

National Veld and Forest Fire Act can be understood in two-fold that is fire protection associations and veldfire prevention through firebreaks. In this section, the researcher gives a break-down of principles that are enshrined in National Veld and Forest Fire Act herein.

### **3.5.1 Fire protection associations**

National Veld and Forest Act 101 of 1998 (in this context to refer to as an Act) aims to prevent and combat natural disasters; such as veld, forest and mountain fires, that are experienced in South Africa (RSA, 1998a). Section 5, of the Act indicates that in each area there should be a communication system developed in order to respond to

veldfires that might be experienced in that area (RSA, 1998a). Moreover, the fire protection officer should be appointed by veldfire protection association in other to ensure that all the duties are executed and that fire fighters are provided with necessary resources to respond to veldfires (paragraph i). However, the challenge is that in deep rural areas, the researcher has observed that there are no fire fighter stations. This shows that this section is applicable in developed areas and yet to be implemented in developing and/or underdeveloped areas.

Section 4 of the Act indicates that veldfire fighters should ensure that they minimise fire danger in an area (RSA, 1998a). In so doing, the Act gives fire protection association the responsibility to use any resource at their disposal to achieve its purpose, i.e., to prevent and combat veldfires in rural area (section 4, paragraph d). However, given lack of resources in deep rural areas, community members rely on their neighbours to put out fires and minimise dangers that veldfire may cause such as damage to property and loss of life.

### **3.5.2 Veldfire prevention through firebreaks**

According to National Veld and Forest Act 101 of 1998 should landowners' land catches fire, they should put up all necessary actions to stop the fire before it escalates to someone's land and damage their property (RSA, 1998a). In most cases, landowners use firebreak as primary intervention strategy to put out fire on farm. However, putting a firebreak in a joint land should be mutual and involve fire protection association (RSA, 1998a). Firebreaks are used as way of mitigating the overspread of veldfires throughout land or farm.

## **3.8 OTHER RELATED ACTS**

There are other pieces of legislations that form part of disaster management. The following legislations will be discussed: National Environmental Management Act, National Health Act, Water Services Act, and Municipal Finance Management Act.

### **3.8.1 National Environmental Management Act 107 OF 1998**

National Environmental Management Act 107 of 1998 aims to provide a co-operative governance among the state and private organisations in decision-making on matters that affect the environment (RSA, 1998b). This act recognises that to sustain the environment, different stakeholders should collaborate to protect the environment from degrading.

#### **3.8.1.1 Duty of care and remediation of environmental damage**

According to National Environmental Management Act 107 of 1998, the person who is responsible for degrading and/or causing pollution in the environment has to take necessary measures in order to minimise or prevent erosion to further degrade the environment (RSA, 1998b). However, this section is not applicable in rural areas wherein industries such as mines operates. The researcher has observed that, for example, in Mpumalanga the industry that made papers damaged or put the health of individuals at risk. The researcher could not bear the smell as he was passing by the main road and one could imagine how those within 5 metres radius of the factory were affected. This is an area where social workers should be involved as they seek to promote good health of the individuals. They should advocate for those marginalised and safeguard their wellbeing.

Furthermore, the Act states that no individual should unlawfully and intentionally commit an act that degrades the environment and should comply which this act in order to protect the environment. In the same vein, subsection 15 asserts that should a person not comply with this Act he or she is guilty and as remedy he or she should be fined (RSA, 1998b). Subsection 15 is mainly seen in urban areas where littering is equating a fine. However, in rural areas, due to lack of dumping site, community members dumped their products everywhere and to the extent that some dumped waste into the river that feeds their community. Their action did not only degrade the environment but also affected their health as they could contract cholera.

### **3.8.2 National Health Act 61 of 2003**

The National Health Act 61 of 2018 (herein referred to as an Act) aims to provide the citizen of South Africa with health service that involves public and private providers of health services as mandated by the Constitution of the Republic of South Africa (RSA, 2003a). In rural areas, there were clinics established to provide health care services to the citizen of South Africa. However, the researcher has noted with concern that in most instances the clinics did not have enough medication. Similarly, the Director-General has to provide health and medical services during natural disasters as mandated by section 21 of the Act (RSA, 2003a). As much as the Director-General is mandated to provide medical and health services, in most instance clinics in rural areas were understaffed and lacked resources to aid the vulnerable. Social workers as mandated by the White Paper of Social Welfare should advocate for the health care of individuals. During and after natural disasters, social workers should ensure that individuals receive good health care to enhance their social wellbeing.

### **3.8.3 National Water Act 36 of 1998**

The purpose of National Water Act 36 of 1998 is to “ensure that water resources are protected, used, developed, conserved, managed and controlled in ways which take into account amongst other factors – meeting basic human needs for present and future generations; promote equitable access to water; redressing the results of past racial and gender discrimination; reducing and preventing pollution and degradation of water resources; promoting dam safety; and managing floods and droughts” (RSA, 1998c:10). Central to the purpose is to ensure equitable distribution of water and addressing the past injustices of water redistribution. However, there is more to be done as water is not equally distributed in South Africa and given that South Africa is a water scarce country – only those in urban areas have the luxury of getting potable water. This injustice harshly felt by rural communities need the intervention of social workers as they were trained to challenge social injustices.

### **3.8.3.1 Public trusteeship of nation's water resources**

According to National Water Act 36 of 1998, the Minister has the responsibility to ensure that water is protected, conserved and controlled in a sustainable manner and redistributed equally amongst the public. However, in deep rural areas, the reality is that there was lack of water in the homes of the citizens of Republic of South Africa. As a coping mechanism, they had to resort to borehole water, which was not affordable for all community members. It is for that reason that they were faced with drought and lack this basic human need – water.

### **3.8.3.2 Prevention and remedying effects of pollution**

In chapter 3, section 19, subsection 1 of National Water Act 36 of 1998 it is stated that community members have to take responsibility should their land in some way cause harm or contaminate water (RSA, 1998c). For example, if the landowner, government included, extract oil, they should ensure that safe precautions are taken in order to prevent water pollution. Moreover, subsection 3 avers that should a person perform an activity that contaminates water; he or she should be reported, and necessary actions should be taken against such individual. That individual could be requested to pay the amount that water management agency spend in order to remedy the damage caused by the landowner (RSA, 1998c). When water is polluted, the community members are predisposed to health issues whereas the Constitution clearly stipulates that health of citizen should be safeguarded.

### **3.8.3.3 Information on flood lines, floods and droughts**

National Water Act No 36 of 1998 in Chapter 14 focuses on monitoring, assessment, and information. It provides that people should be informed of any information that pertains to flood and droughts and should be made available to the public. Moreover, people in the township should be informed of the potential flooding hazard prior to the occurrence of floods (RSA, 1998c). When natural disaster is more likely to cause harm or cause drought, the water management authority should make the public aware. Technology is the mode of communication that can speedily spread warning, however, not all community members in rural areas have the luxury of technological

devices – they rely on radio. Moreover, water management institution should also use resources at their disposal to alert the public about possible flood and/or drought and possible river that might overflow its banks as a result of heavy rains (RSA, 1998c). The significance of making information available to the community is to ensure that people do not get to consume water that might cause cholera and affect their health. In terms of the drought, the institution is to inform the public to store water against.

### **3.8.4 Water Services Act 108 Of 1997**

Water Services Act aims to “provide access to basic water supply and the right to basic sanitation necessary to secure sufficient water and an environment not harmful to human health or well-being” (RSA, 1997b:11). This act attempts to ensure that there is sufficient water for the public and the water should not cause harm to the public. Hence, Water services at the municipal level is regulated by Water Services Act (Mackay, 2003).

### **3.8.5 Municipal Finance Management Act 56 of 2003**

Municipal Finance Management Act 56 of 2003 in chapter 3 gives the municipal rights to have relief, charitable, trust or other funds (RSA, 2003b). In other words, the municipality has to open an account for the purpose of social relief. Those funds could be used during and after natural disasters to provide survivors of natural disasters with food and water (basic human needs).

## **3.9 CONCLUSION**

This chapter has covered legislative frameworks of disaster management as well as other supportive legislations that are employed to assist those in need. The Constitution of the Republic of South Africa set the precedent and made a provision that the citizen of South Africa should be provided with housing and social relief. Other policies that were drafted and discussed herein, give precise details and duties

that different departments in their different government are out to promote for the wellbeing of individuals.



# **ARTICLE 1**

## **CHALLENGES FACED BY SMALL-SCALE FARMERS IN THE FACE OF NATURAL DISASTERS IN RURAL AREAS: AN AFROCENTRIC PERSPECTIVE**

### ***Abstract***

The role that is played by Agricultural sector to the country's Gross Domestic Product is undisputed. However, like any other sector, Agricultural sector is not immune to the impact of natural disasters. Be that as it may, this study was aimed at showing the challenges faced by small-scale farmers in the face of nature disasters in rural areas. The study adopted qualitative research approach and exploratory case study design. The study population consisted of small-scale farmers, disaster management officer and social workers from one village called Runnymede which is found in Tzaneen Municipality. There were 15 participants in this study who were drawn using purposive sampling technique. Data was then collected by means of focus group discussion with community members (small-scale farmers) and through individual semi-structured interviews with social workers and disaster management officer. The data was then analysed thematically using inductive thematic analyses. The study found that community member (small-scale farmers) have plethora of challenges during and after natural disasters. Some of the challenges that they face include lack of water for irrigation and support from different stakeholder. As such, the study recommends an inter-professional model to be used in pre-, during and post disasters meetings.

Keywords; natural disasters, Vulnerability theory, small-scale farmers; rural areas

### **INTRODUCTION**

Whether naturally occurring or induced by human beings or both, disasters can have devastating effects on the most vulnerable section of the population. Disasters can mean various things to different people. The Disaster Management Act 57 of 2002 defines a disaster as a disastrous event that occurs or threatens to occur (South

Africa, 2002). On the same wavelength, UNISDR (2009:9) sees disaster as “a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope with its own resources”. Again, disaster is an accident or event that occurs and is beyond human control (Fahrudin, Baco, Abdul Malek, Haji-Yusuf, n.d). In this study, disaster will refer to natural disasters such as floods, droughts and hail winds that are likely and have occurred at The Greater Tzaneen Municipality.

People, particularly those who are disadvantaged, are exposed to various crises and natural disasters due to unpredictable climatic changes and as a result become vulnerable. Vulnerability refers to “the combination of factors that determine the degree to which someone’s life, livelihood, property and other assets are put at risk by a discrete and identifiable event (or series or ‘cascade’ of such events) in nature or in society” (Wisner, Blaikie, Cannon & Davis, 2004:11). In light of that, small-scale farmers are seen as individuals in the community who are marginalised due to lack of accessibility to capital, technology, and assets. There is an ongoing debate in defining small-scale farmers globally. For instance, United States Department of Agriculture defines small-scale farmer as an individual who has a gross sale of not more than \$250 (Gouldthorpe & Goodwin, 2013), whilst, in South Africa, small-scale farmer is seen as a black person who does not have sufficient resources (capital and technology) for production (Shabangu, 2016). In Swaziland, a small-scale farmer is seen as a farmer who have less than two hectares of land and not having developmental resources (Kongolo & Dlamini, 2012). In this study, small-scale farmer refers to an elderly black farmer who resides at Runnymede village and practices farming with insufficient resources (capital and technology). In light of the above, this study registered a catalogue of challenges faced by rural people in the wake of natural disasters.

## **PROBLEM FORMULATION**

Agricultural sector plays a vital role globally and contribute enormously to gross domestic product (GDP). Though some have become commercial farmers, many are still small-scale farmers who are engaged in subsistence farming. In South

African rural areas, agriculture is the beacon of the rural economies and the trademark of rural people's livelihoods (Mpandeli & Maponya 2014). In South Africa, as elsewhere in Africa, rural people depend on rain-fed agriculture, which is volatile due to climate change and its manifestations (Nyahunda & Tirivangasi, 2019). Therefore, it means the viability of agricultural activities is under siege owing to the abrupt resurgence of these natural disasters. Almost a decade ago, Makwara (2013) underscored that, as a result of the eruption of natural disasters, such as floods and cyclones, small-scale farmers cannot use animals and plants to predict weather as they are getting eroded by floods. Furthermore, Nyahunda and Tirivangasi (ibid) pointed out that food production in rural areas is dwindling owing to climate change impacts, manifesting in erratic rainfall patterns, heat waves leading to long dry spells, and natural disasters leading to destruction of crops and distribution of pathogens that kill livestock. As such, small-scale farmers' efforts to escape the challenges of poverty and unemployment remain unrealisable and unsuccessful because the backbone of food and economic security is destroyed by natural disasters. Nonetheless, indigenous people have survived the spell of natural disasters, as some confronted with flood develop sand banks alongside their fields to stop water flooding their crops. Others when confronted with droughts, graze along the rivers or wetlands to ensure that their livestock survive. In addition, certain drought resistant trees and shrubs (*mbhandwa*, *ntoma*, *nkonono*, *nhlangu* and *nyiya*) known to be rich in minerals are potted from far areas and planted by the indigenous farmers.

### **AFROCENTRICITY THEORY**

Different authors take different positions in explaining the Afrocentricity Theory. For instance, Asante (1998:2) defined Afrocentricity as "placing African ideas at the centre of any analysis that involves African culture and behaviour". Moreover, Mazama (2003:5) sees the Afrocentricity theory as 'epistemological centeredness' which involves placing Africans as self-willed agents instead of objects of investigations. On the same wavelength, Thabede (2008:233) sees Afrocentricity as a "perspective that allows Africans to be subjects of historical experiences rather than objects on the fringes of Europe". Again, Pellerin (2012) sees Afrocentricity as a philosophical and theoretical construct in the discipline of African Studies where laws, generalisations, methodologies and theories are created. Moreover, Makhubele, Mabvurira and Matlakala (2018) aver that Afrocentricity is about

affirming the local community's cultural worldview in their environment. All the above authors use different words to define Afrocentric or Afrocentricity theory. However, they all point out that the Afrocentricity Theory emphasises issues that involve African populations to be studied using African lenses.

### **Relevance of Afrocentricity Theory to the Study**

Natural disasters are not a new phenomenon. Local people of ancient times have not been immune to natural disasters. They have relied on their traditional warning signs to prepare and respond to the rage of natural disasters. It is for this reason that in Africa, as Nyong, Adesina and Elasha (2007) observed, traditional knowledge is used by local communities for survival in the wake of natural disaster. This was broadened by Shaw, Takeuchi, Uy and Sharma (2009), who wrote that for centuries, indigenous people have been using their indigenous knowledge to sustain, manage and reduce harm in their environment. Supporting the above authors view, Jones (2012) states that social workers and disaster management authorities either aligned or overlooked local strategies in preventing, resisting, adapting, preparing, mitigating and recovering from the ramifications of natural disasters. The Afrocentricity Theory helped the researchers to close the gap and relook at indigenous strategies that local communities use in addressing ramifications of natural disasters. This was built on the view of Hiwasaki et al. (2014) who postulated that the indigenous knowledge of indigenous communities can contribute significantly in disaster risk reduction, save human lives and property from the ramifications of natural disasters. In corroboration, Iloka (2016) and Rahman, Sakurai and Munadi (2017) reported that countries that adapt, resist, and recover from natural disaster have adopted indigenous strategies of local communities. For instance, local people relied on animals to predict natural disasters. In support, earlier study by Kamara (2005) found that the change in bird's cries indicate the change in seasons, and high birds' nests near a river predicts floods. However, disaster risk reduction in South Africa using indigenous knowledge remains understudied and this study sought to close the gap and contribute to the broader knowledge. Over and above, the relevance of Afrocentricity theory in this study is justified by the fact that the most vulnerable to the impact of natural disasters are African in rural areas who lack access to modern

infrastructure and technology (Noyoo, 2007; Maponya & Mpandeli, 2016; Nyahunda & Tirivangasi, 2019).

## **RESEARCH METHODS**

The study adopted qualitative research approach and exploratory case study design. The researchers opted for qualitative research design as they wanted participants to freely share express challenges they face during natural disasters (Bless et al. 2013). In other to sought information from the participants, the researchers opted for exploratory case study design due to its ability to clearly unearth information from the participants. Equally, de Vos, Strydom, Fouché and Delport (2011) saw exploratory case study design useful when studying a topic that is less studied and/or when information is not well known. Those who participated in the study were drawn from one village in Runnymede which is found in Tzaneen Municipality. The total number of 15 participants, consisting of 10 community members (small-scale farmers), 4 social workers and 1 disaster management manager were sampled to participate in this study. Social workers were included in this study due to their broader scope of practice, as they seek to enhance the social wellbeing of all community members (small-scale farmers included). Moreover, the researchers included the small-scale farmers because in every household during raining season, individuals' practices crop farming (Mopani District Report, 2007).

The researchers used purpose sampling techniques to sample those participants who poses indigenous knowledge in farming and those who respond in the midst of natural disasters. Data was then collected by means of focus group discussion with community members (small-scale farmers) and through individual semi-structured interviews with social workers and disaster management manager. The data was then analysed thematically using inductive thematic analyses. The researchers opted for inductive thematic analysis due to its ability to turn themes to meaning (Braun & Clarke, 2006).

### **Description of study area**

The study was conducted at The Greater Tzaneen Local Municipality, which is found in Mopana District. According to StatsSA (2011), the municipality consist of Tzaneen, Nkowankowa, Lenyenye, Letsitele and Haenertsburg town and 125 rural villages

with almost 80% of households residing in rural villages. Moreover, the local municipality has a total population of 390 095 with 80% of the population residing in rural areas, among those in rural areas 5.7% of the population are the elderly. Mopani District Report (2007) avow that majority of the land which was privately owned was mainly used for commercial farming and a small portion was under the leadership of tribal authorities. However, this study was conducted at N'wa-Mitwa, Runnymede Village. The community was selected because it was convenient, and the District report also highlighted that the area was a lowveld area and exposed to floods and heavy rainfalls. Moreover, the village was chosen because of its accessibility and as reported by Mopani District Report (2007) it was prone to floods and heavy rainfall. The village had reportedly 42.5% households headed by females (StatsSA, 2011). This demonstrated that fortunately the slight majority of households had a male person to protect the family against natural disasters.

## **FINDINGS AND DISCUSSIONS**

From the findings, the researchers developed themes guided by the study objectives. The researchers used inductive thematic analyses and the themes were developed manually with the aid of six steps pointed out by Braun and Clarke (2006). For the purpose of this article, the researchers found that community members in Runnymede community were experiencing plethora of challenges in the face of natural disasters. Some of the themes that emerged are discussed herein. The researchers waded the findings with two theories that anchored this study, namely; Afrocentricity and Vulnerability Theories.

### **Lack of water for irrigation**

Water is the source of life and its availability is the bedrock for development. As a result of separate development (apartheid), small-scale farmers were relocated to environment that was barren. Most small-scale farmers in rural areas, characterised by low-level literacy and under-development, are unable to afford state-of-the-art facilities for farming. Unlike commercial farmers who could afford boreholes, small-scale farmers in rural areas depend on rain to irrigate their crops. The situation

becomes worse during drought. Due to the impact of global warming resulting in lack of adequate rainfall in their communities, small-scale farmers experience decline in food production and income, thus making food insecurity a challenge to them and their communities. On that score, Food and Agriculture Organization [FAO] (2015) expatiated that as a result of natural disasters, precisely drought, small-scale farmers in developing countries find themselves unable to afford necessary facilities, including boreholes due to their economic status and fail to maximise food production. This uphold the views of liabilities, one of the key tenets of Vulnerability Theory, which holds that socioeconomic status serves as a risk factors for vulnerability to natural disasters. In this context, inability to afford boreholes, render small-scale farmers more vulnerable to the severe effects of drought on their source of income. In light of the above, one of the participants (small-scale farmers) posited that:

*“As small-scale farmer, our area is very dry, no perennial rivers nearby or within reach and when we are faced with drought, the impacts are negative as when we plant, because of drought and no water, our seedlings die. We do not have drought resistant seeds.”* (Participant 2, Small-scale farmer, FGD).

Another small-scale farmer echoed that:

*“As farmers we are greatly affected by high temperatures which lead to lack of water. We plant our seedlings and they die. We therefore are not able to make any money and we starve.”* (Participant 7, small-scale farmer, FGD).

Moreover, key informant (Disaster Management Officer), indicated that:

*“When there is shortage of water, the Department of Agriculture notify us and we go there with our water tank trucks, but do not have enough water tank trucks to reach every village.”* (Participant 16, Disaster Management Officer)

As much as agricultural sector plays a significant role in GDP of the country, during drought, small-scale farmers do not have facilities either to source water (boreholes) and harvest water (tank for water preservation). From the above findings, it is depicted that due to poor economic status, dry area and little support from both private and public funding agencies, small-scale farmers cannot maximise production and ensure food security. Hence, Yohe and Tol (2002) postulated that economic resource present small-scale farmers with the ability to adapt to drought. It is worth noting that small-scale farmers cannot even afford drought resilient crops (hybrid crops) due to fiscal challenges.

Given that drought is not a new phenomenon, ancient people have been using their traditional methods such as removing water-consuming plants which in most cases are foreign to the land and mulching to address evaporation and maintain moisture. Such practices help rural small-scale farmers in ensuring that there is food production in spite of dry seasons.

### **Support from Stakeholders in the face of natural disasters**

What should be underscored is that the successful way for disaster risk reduction is on collaboration with different institutions. In the words of Twigg (2015), institutions, being social workers, traditional leaders, field extension officers and disaster management team, need to come together with multitude of knowledge and skills to reduce the effects of natural disasters. In other words, when disaster management team is unable to respond to sudden floods in rural areas as a result of blockage of routes, another institution, being social workers should intervene. For instance, in the years 1997, 2008 and 2011, there was sudden floods that made it difficult for the response team to access rural communities in Ugu District in Kwa Zulu-Natal. So with collaboration amongst different stakeholders, victims and survivors of natural disasters will get support and assistance quicker.



## **Insufficient support from social workers**

There are numerous stakeholders who are called upon to provide relief; amongst others included are social workers. Social work profession operates within a broader spectrum as it seeks to enhance the social functioning of individuals, families and communities. However, natural disasters disrupt the social equilibrium of the individuals, families, and communities, thus, the intervention of social worker even during and post disaster occurrence, is a requirement. Be that as it may, in this study participants (small-scale farmers) in the focus group discussion revealed that they are getting insufficient professional social support from social workers. Likewise, they were not quite aware of the role of social workers in the midst and post occurrence of natural disasters. The following are the narratives from focus group discussion with small-scale farmer:

*“We do not get any help from social workers when we lose our facilities and equipment which we use for framing. You hardly see a social worker coming to assist due to floods but come only for child support grants. I was not sure that they have a bigger stake on farming particularly when we are affected by floods or droughts.”* (Participant 2, small-scale farmer, FGD).

The social work practice does not have a narrow scope; it looks at a wider range of issues ranging from micro to macro spheres of human life. On that score, National Association of Social Workers (NASW) mandate social workers to provide social service during public emergencies (NASW, 1999), natural disasters included. In essence, social workers should be at the forefront to prevent, protect, and enhance the social wellbeing of individuals and communities during and after natural disasters. Thus, about half a decade ago, Syeda and Adnan (2016) reported that during disasters, social workers could, with the right resources, play the role of evacuators, medical assistants, client assessors and crisis counsellors. It is for those reasons that Nyahunda (2020) propelled the idea that social work practice is well positioned to address the ramifications of natural disasters caused by climatic change. Social workers could use their social work methods to educate individuals-

small-scale farmers, about the effects of climate change for preparedness prior the calamity.

Furthermore, they can link those community members and small-scale farmers affected by natural disasters with relevant agency and provide counselling to those that may need it individually or in groups. Social Work intervention is context specific and culture sensitive. Their methods of intervention somehow mirror what individuals, families, and communities use in addressing their challenges. It could be deduced that, it is a shallow view if local social workers do not invoke the intrinsic values of co-existence and utilisation of resources for the betterment of the lives of the community, in this case, small-scale farmers. Such values are not mutually exclusive to social workers and small-scale farmers and that should be tapped as a resource by the professionals.

### **Traditional leaders**

Traditional leaders are the getaway in their communities and they are the ones who give entry access. They also have a mandate to preserve the traditional knowledge that can contribute to disaster risk reduction (Twigg, 2015). However, Knoetze (2014) noted with concern that policymakers tend to overlook and underestimate the role played by traditional leaders in disaster risk management strategies. The possible reason that traditional leaders are underestimated and overlooked is due to the fact that people have embraced modern form of governance (Ferkins, Shilbury & O'Boyle, 2017). In essence, due to modernisation, people do not see power being centralised to an individual and believe that traditional people are outdated, hence, they are overlooked and underestimated by policymakers on disaster risk management. Subsequently, Zamisa and Mutereko (2019) opined that the overlook of traditional leaders has led to a dearth of information in both disaster risk management and governance. Be that as it may, in this study, small-scale farmers saw traditional leaders as people who played a significant role when faced of natural disasters. One of the small scale-farmer said that:

*“Our traditional leaders fight for us in times of need. When natural disasters strike, be it drought, fire or floods, we usually go to our traditional leader and he will call ‘huvo’ so community members can come together to discuss the issue” (Participant 7, small-scale farmer, FGD).*

In corroboration, one of the key informants (social workers) stated that:

*“Sometimes we get clients referred by Chiefs and Ndunas for social relief of distress and trauma counselling” (Participant 11, Social Worker)*

Traditional leaders are responsible for protecting their members and for conserving the values, norms, customs, mores, and traditional ways so as that it can be transferred to the oncoming generation. They are the custodians and holders of indigenous knowledge systems pertinent to their culture. In the face of natural disasters, in this study it was established that traditional leaders’ role was minimal but efficient to community members as they safeguard the well-being of their community members. Traditional Leader’s call to assemble at the head kraal give credit to community resilience, which indicates that an individual resilience is a result of the accessible social support that one receives in the community that he or she finds herself into. Likewise, in order to adapt, cope, and resist disasters, individuals provide and garner social support amongst themselves and from traditional leaders. On that note, traditional leaders provide community members with hope against a variety of social ills assailing them. Typical example is the use of mediums to perform some rituals in an attempt to make rain.

### **Insufficient support from agricultural extension officers**

The agricultural extension officers are trained to provide commercial and subsistence farmers’ technical knowledge in respect of their type of farming. Their role is to offer advice to farmers on the seasonal change and how that could affect their production (Mugandani, Wuta, Makarau & Chipindu, 2012). In light of that, Runnymede village was exposed to high temperature that resulted in evaporation. This was supported by Khwashaba (2018) who opined that Mopani District was exposed to extreme

temperatures and heat wave that often led to evaporation. On that score, Dube and Phiri (2013) averred that communities with higher temperature also experience insufficient precipitation. For this reason, the agricultural extension officers are needed to provide small-scale farmers knowledge of adaptation strategies that they could adopt in the midst of disasters. It is worth noting that FAO (2011) underscored that agricultural extension officers should be accessible at all times so that farmers can have production. But in rural areas, small-scale farmers have the challenge of accessing the assistance of agricultural officers especially when they are experiencing drought. One of the small-scale farmers said that:

*“The agricultural extension officers are unable to help us with advices regarding water storage, drought –resistant plants and hybrid seeds, we are suffering. They are not even brokering us for other technical expertise which they might not have or even available funding” (Participant 2, Small-scale farmer, FGD)*

In corroboration another small-scale farmer averred that:

*“When our seedlings die, we often wait for the month of March to try to replant as it is an opportune time given that it the start of another season(autumn)” (Participant 3, Small-scale farmer, FGD)*

Another small-scale farmer stated that even if the extension officers could arrange for funding for boreholes to provide water, as some have boreholes, they were also faced with pest invasion, which affect their food production. The small-scale farmer said:

*“As small scale farmers we are grossly affected by natural disasters. If we plant tomatoes, for example, we need to have sufficient water because if the tomato plants are not sufficiently watered they wilt. When that happens pests find it easy to invade the plant. Pesticides are not affordable for the hectares of land we are farming in. So we operate at a loss as we buy the seedlings from the nursery only to not make profit from them.” (Participant 6, Small-scale farmer, FGD)*

The role of extension officers is to offer the skills that equip farmers to deal with the impact of natural disasters. It was discovered that small-scale farmers do not get assistance from agricultural extension office and as a result are exposed to experiencing the harsh impact of drought and exposed to pest invasion as they are not equipped with adaptation strategies. This reaffirms the findings of Makhubele, Shokane and Mabasa (2016) and Nyahunda (2020) who found that small-scale farmers are unable to access the service of agricultural extension officers. However, the availability of agricultural extension officers does not mean that indigenous people should abandon their traditional coping mechanism. For instance, Chanza (2014) wrote that the inability of indigenous people to practice timing planting and select hybrid crops is because their traditional knowledge has been diluted by the knowledge and skills of agricultural extension officers. It should be noted that traditionally, community members, in unity, used to perform raining rituals in the face of drought. This showed their level of co-existence and community resilience to disasters. On that score, it should be underscored that one of the key tenets of Resilience Theory that guided this study is community resilience which relies on community members' ability to adapt, respond, and recover from natural disasters and bounce back to the state of normality. In essence, community members will use the experience they acquired to develop mitigating strategies when confronted with challenges.

### **Disaster management officers**

Disaster management team operates at local, district, and national levels and are responsible for the planning, organisation, coordination, and implementation of measures to mitigate, prepare, respond, and recover from natural disasters. In light of that, when a natural disaster, such as floods, earthquake, or cyclone erupt, the response team needs an accurate and timeline information to assist the victims of natural disaster (Arain & Pheng, 2006). In most instances, disaster management team also rely on the experience that they acquired during other disasters for anticipating the severity of the disaster on the livelihood of individuals. Their ability to anticipate, evaluate, resolve, and learn from the past disasters assist them in

effectively managing the impact of natural disasters (Arain, 2015). In this study, it was explained that during floods and cyclones, disaster management team responded. One of the small-scale farmers underscored that:

*“During floods, the disaster management team came here and they provided the victims and survivors with tents and some of our fellow community members were housed in our local school when they lost their homes. The evacuation was just hurry-hurry, either you comply with their instructions or you are left stranded.” (Participant 9, small-scale farmer, FGD).*

In line with the above assertion, it was discovered that disaster management team attempted to provide support to the victims of natural disasters. However, they are also had challenges of staffing, and shortage of resources. The disaster management officer articulated that:

*“This profession is a scarce skill in South Africa. We do not have sufficient resources to reach all those who are in needy. However, during a disaster, depending on its magnitude, we go with the little that we have to provide assistance to the victims of the natural disasters.” (Participant 16, Disaster Management Officer)*

Disaster management team aims at reducing or avoiding potential loss of livelihood from natural disasters. The team respond to natural disasters in the quest to ensure that the victims and survivors receive assistance after and during disasters. In particular, they are not concerned with the emotional and psychological impact of the disasters. More so, in this study, participants indicated that survivors and victims of natural disasters were provided with temporary accommodation during and after experiencing the disaster.

## **CONCLUSION**

The above study showcase that community members (small-scale farmers) are not immune to the impact of natural disasters. However, from the study, the participants indicated that help is hard to come by from different stakeholders, social workers included. That indicated that different stakeholders are pushing into different

direction wherever they have to assist community members. It, thus, talk to the issue of inter-professional collaboration in the midst of natural disaster. If there is collaboration, community members (small-scale farmers) will be in a better position to find resources that they can utilise to address their own handicap. Again, the availability of resources will assist community members to develop a steady resilience when faced with natural disasters. It is on that note that researchers calls for an inter-professional collaboration amongst small-scale farmers, disaster management officers and social workers in strategic meeting of tackling disasters.

## REFERENCES

- Arain, F. (2015). Knowledge-based approach for sustainable disaster management: Empowering emergency response management team. *Procedia engineering*, 118, 232-239.
- Arain, F. M., and Pheng, L. S. (2006). Knowledge-based decision support system for management of variation orders for institutional building projects. *Automation in Construction*, 15(3), 272-291.
- Asante, M. K. (1988). *Afrocentricity*. African World Press.
- Bless, C., Higson-Smith, C., & Sithole S.L. (2013). *Fundamentals of social research methods: An African perspective*. Juta & Company Ltd.
- Braun, V., and Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Chanza, N. (2014). *Indigenous knowledge and climate change: Insights from Muzarabani, Zimbabwe*. [PhD Thesis]. Nelson Mandela Metropolitan University.
- De Vos, A.S., Strydom, H., Fouché, C.B and Delport, C.S.L. (2011). *Research at Grass Roots: For the social sciences and human service professions*, (4<sup>th</sup> ed.). van Schaik Publishers.
- Dube, T., and Phiri, K. (2013). Rural livelihoods under stress: The impact of climate change on livelihoods in South Western Zimbabwe. *Dube, T. & Phiri, K.(2013), Rural livelihoods under stress: The impact of climate change on livelihoods in South Western Zimbabwe, American International Journal of Contemporary Research*, 3(5), 11-25.
- Fahrudin A, Baco B.S, Abdul Malek, D.M, and Haji-Yusuf, M (n.d). Disaster Management and Post-Disaster Social Services: The Need to Prepare Social Work Students to Practice in Disaster Setting

[http://www.ums.edu.my/fksw/images/files/BIL7\\_8-2001-](http://www.ums.edu.my/fksw/images/files/BIL7_8-2001-)

[2002/Disaster%20Management%20And%20Post-](#)

[Disaster%20Social%20Services.pdf](#) Retrieved 04 November 2018.

- Ferkins, L., Shilbury, D. and O'Boyle, I. (2017). Leadership in governance: Exploring collective board leadership in sport governance systems. *Sport Management Review*, 21(2018), 221-231. <https://doi.org/10.1016/j.smr.2017.07.007>
- Food and Agriculture Organization [FAO]. (2015). The Impact of Natural Hazards and Disasters on Agriculture and Food Security and Nutrition: A Call for Action to Build Resilient Livelihoods. Available at: <http://www.fao.org/3/a-i4434e.pdf> Accessed on 15 November 2019.
- Gouldthorpe, G., and Goodwin J. (2013). Small Farmers Big Challenges: Anneds Assessment of Florida Small Scale. Farmers. *Journal of Rural Social Sciences*, 28 (1), 54 – 79.
- Hiwasaki, L., Luna, E., and Syamsidik, S. R. (2014). *Local & indigenous knowledge for community resilience: Hydro-meteorological disaster risk reduction and climate change adaptation in coastal and small island communities*. Jakarta: UNESCO, 60.
- Iloka, N. G. (2016). Indigenous knowledge for disaster risk reduction: An African perspective. *Jàmbá: Journal of Disaster Risk Studies*, 8(1).
- Jones, G. (2012). The importance of indigenous knowledge and good governance to ensuring effective public participation in environmental impact assessments. *ISTF NEWS, Special Report*.
- Kamara, J. (2005). Indigenous knowledge in natural disaster reduction in Africa. *Environmental and Poverty Times*, 3.
- Khwashaba, M. E. (2018). *Vulnerability and resilience in the Mopani district municipality in a changing climate* (Doctoral dissertation, North-West University).
- Knoetze, E. (2014). Legislative regulation of the developmental functions of traditional leadership—in conflict or cohesion with municipal councils?. *Speculum Juris*, 28(1), 161-195.
- Kongolo, M., and Dlamini, D. K. (2012). Small-scale livestock farming in developing areas of Swaziland & south Africa. *International Journal of Science and Technology Bahir Da*, 1(3), 100 – 111.
- Makhubele, J. C., Mabvurira, V., and Matlakala, F. K. (2018). Exploring language as an impediment to or a resource for the indigenisation of social work



- education. *Southern African Journal of Social Work and Social Development*, 30(1), 1-20
- Makhubele, J. C., Shokane, A. L., & Mabasa, M. A. (2016). Rural perspectives, challenges and strategies of climate change amongst small-holder farmers in Mopani district of Limpopo province. *Indilinga African Journal of Indigenous Knowledge Systems*, 15(2), 151-174.
- Makwara, E. C. (2013). Indigenous knowledge systems and modern weather forecasting: exploring the linkages. *Journal of Agriculture and Sustainability*. 2(1), 98–141.
- Mazama, A. (2003). *The Afrocentric Paradigm*. Trenton. Africa World Press, Inc.
- Mopani District Report (2007). Mopani District Municipality Annual Report 2006 – 2007. [http://www.mopani.gov.za/docs/reports/ANNUAL%20REPORT%202006-07\\_financial.pdf](http://www.mopani.gov.za/docs/reports/ANNUAL%20REPORT%202006-07_financial.pdf) Date of Access; 01 November 2019.
- Mpandeli, S., and Maponya, P. (2014). Constraints and challenges facing the small scale farmers in Limpopo Province, South Africa. *Journal of Agricultural Science*, 6(4), 135.
- Mugandani, R., Wuta, M., Makarau, A., and Chipindu, B. (2012). Re-classification of agro-ecological regions of Zimbabwe in conformity with climate variability and change. *African Crop Science Journal*, 20, 361-369.
- National Association of Social Workers (NASW). (1999). Code of ethics of the National Association of Social Workers. Retrieved August 24, 2018 from <http://www.soicalworkers.org/pubs/code/code.asp>
- Noyoo, N. (2007). Indigenous knowledge systems and their relevance for sustainable development: a case of southern Africa. *Indigenous Knowledge Systems and Sustainable Development: relevance for Africa*, 167-162.
- Nyahunda, L. and Tirivangasi, H.M. (2019). Challenges faced by rural people in mitigating the effects of climate change in the Mazungunye communal lands, Zimbabwe. *Jàmbá: Journal of Disaster Risk Studies*. 11(1):1-9 <https://doi.org/10.4102/jamba.v11i1.596>
- Nyahunda, L. (2020). Participation of Rural Women in Mitigating the Effects Of Climate Change in Vhembe District, Limpopo Province, South Africa Unpublished Thesis in Social Work. University of Limpopo.
- Nyong, A., Adesina, F. and Elasha, B. (2007). ‘The value of indigenous knowledge in climate change mitigation and adaptation strategies in the African Sahel’.

- Mitigation and Adaptation Strategies for Global Change* 12, 787–797. <https://doi.org/10.1007/s11027-007-9099-0>
- Pellerin, M. (2012). Benefits of afrocentricity in exploring social phenomena: understanding afrocentricity as a social science methodology. *The Journal of Pan African Studies*, 5(4): 149-160
- Rahman, A., Sakurai, A., and Munadi, K. (2017, February). Indigenous knowledge management to enhance community resilience to tsunami risk: Lessons learned from Smong traditions in Simeulue Island, Indonesia. In *IOP Conference Series: Earth and Environmental Science* (Vol. 56, No. 1, p. 012018). IOP Publishing.
- Shabangu, P. (2016). Challenges faced by small scale farmers' in Swaziland: a case of Hhohho region ([Masters Dissertation, University of the Free State]).
- Shaw, R., Takeuchi, Y., Uy, N., and Sharma, A. (2009). *Indigenous Knowledge: Disaster Risk Reduction*. European Union (EU)/ISDR: Kyoto.
- South Africa. (2002). The Disaster Management Act 57 of 2002. Cape Town: Government Printer.
- Statistics South Africa [StatsSA]. (2011). General Household Survey 2011 [dataset]. Version 2. Pretoria. Statistics South Africa [producer], 2011. Cape Town: DataFirst [distributor], 2011. Available at: <http://www.datafirst.uct.ac.za/dataportal/index.php/catalog/192>. (Accessed 2016 September 2019)
- Syeda, M. H., and Adnan, M. (2016). Rebuilding lives: Natural disasters and role of a social worker in Pakistan. *Journal of the Research Society of Pakistan*, 53(2).
- Thabede, D. G. (2008). The African worldview as the basis of practice in the helping professions. *Social Work/Maatskaplike Werk* 44:233–245.
- Twigg, J. (2015). *Disaster risk reduction*. London: Overseas Development Institute, Humanitarian Policy Group. London.
- United Nations International Strategy for Disaster Reduction [UNISDR]. (2009). *2008 Disasters in numbers*. Retrieved on March 14, 2019 from <http://www.unisdr.org/eng/media-room/facts-sheets/2008-disasters-in-numbers-ISDR-CRE.pdf>.
- Wisner, B., Blaikie, P., Cannon, T., and Davis, I. (2004). The disaster pressure and release model. *At risk: natural hazards, people's vulnerability and disasters*. (2<sup>nd</sup> ed.). Routledge.

Yohe, G., and Tol, R. S. (2002). Indicators for social and economic coping capacity—moving toward a working definition of adaptive capacity. *Global environmental change*, 12(1), 25-40.

Zamisa, N. A., and Mutereko, S. (2019). The role of traditional leadership in disaster management and disaster risk governance: A case of Ugu District Municipality by-laws. *Jàmbá: Journal of Disaster Risk Studies*, 11(1), 1-9.

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# ARTICLE 2

## SOCIAL EFFECTS OF NATURAL DISASTERS ON SMALL SCALE FARMERS IN RURAL AREAS

### *Abstract*

Disasters have devastating impact on the livelihoods of small-scale farmers in rural areas. In many case, the small-scale farmers are mainly vulnerable to disasters due to their lack of resources to cope with them. This paper was aimed at exploring the social effects of natural disasters on small-scale farmers in rural areas. The study adopted a qualitative research approach and case study design. The study was conducted at Runnymede village in Tzaneen and 10 participants were purposively sampled to form part of focus group discussion. The data was collected until the level of saturation and analysed thematically using thematic content analysis. The study found that small-scale farmers have challenges in accessing their small-holding farms, others end up being homeless, displaced, experienced health related risk and some psychological effects as a result of disasters. The participants indicated that due to natural disasters, they were unable to access their small-holding farms. This is due to the fact that people in low-resourced and under-developed areas, with low socio-economic conditions are unable to build shelters that are strong enough to withstand heavy storm. Accordingly, the study recommends better infrastructure and drainage systems to deal with heavy rainfall and avoid floods.

**Keywords:** *natural disasters, effects, small-scale farmers, displacement, health-related risk*

### INTRODUCTION

Natural disasters, in this study referring to floods, can occur anywhere and anytime in a year. On their path, floods have devastating effects on the livelihood and food security of community members, particularly small-scale farmers. By their nature,

disasters cause damage to property, loss of human life, displacements, heightened poverty levels, and loss of means of production (Chapagain & Raizada, 2017). In as much as natural disasters are unpredictable in terms of their occurrence and extend of damage, rural people experience a great deal at the aftermath of natural disasters because the mainstay of their livelihoods, namely agriculture and livestock production get destroyed. The mammoth challenge is that after the occurrence of natural disasters in different forms, rural communities require emergency intervention in the form of empowerment, survival and resilient skills (social skills) to protect them from second waves of the disasters; and such services are limited. Wells, Springgate, Lizaola, Jones, and Plough (2013) weighs in by maintaining that the social impacts of natural disasters are not well recognised in the assessment of natural disasters in spite of their devastating impacts on the wellbeing of individuals. On that note, this study was aimed at exploring the social effects of natural disasters on small-scale farmers in rural areas.

## **PROBLEM EXPOSITION**

Disasters knows no boundary as many people are exposed to their rampage. But those mainly affected to its effects are people in rural communities. In his thesis, Matlakala (2021) denoted that people in rural areas are mainly exposed to natural disasters. One of the reason is that, due to their low socioeconomic status, community members are unable to afford resources that they can use to warn them about the upcoming disasters (Zulqarnain, 2013). What should be underscored is the fact that those in rural areas depend on farming to eradicate poverty and deal with food security. It is for that reason that most community members have small-holding farms. Even that is the case, they suffer a big setback when hit by disasters, be floods, drought and/or field fires. In light of that, Campbell and Knowles (2011) reported that after experiencing Cyclone Nargis in 2008, Myanmar experienced floods with 63% of farmland affected. On the same breath, farming equipment and animal feed were destroyed as a result of the cyclone. On the other hand, Arnoldy (2010) underscored that due to floods, farmer in Pakistan lost herds of livestock. Even though the above authors see this as an economic blow, in rural areas, such loss is seen as not only financial blow but livelihood blow. This is due to the fact that most community members rely on farming for food security.

It is undebatable that some of the community members lose their breadwinners due to floods. Equally, small-scale farmers are not immune to loss of human capital, Zulqarnain (2013) bemoaned that due to floods, small-scale farmers not only suffer economic factors, they also lose their hardworking employees. As a result of the loss of the loved one, the remaining members in the family are unable to secure food security and thus exposed to malnutrition and other diseases. Not only that small-scale farmers lose their human capital, but they are also unable to access their small-scale holders due to floods. This can be largely to the fact that small-scale farmers in the rural areas have poor drainage system that leave their roads flooded (Rock & Corbin, 2007). Those who are fortunate to have better equipment are not prone to some challenges. For instance, Mamun, Huq, Papia, Tasfina and Gozal (2019) reported that during natural disasters, floods specifically, some small-scale farmers are experience psychological challenges such as depression and emotional disturbance. Depression was to be expected as small-scale holders prove to be milk and butter for community members in deprived communities.

## **ADOPTED METHODOLOGY**

### **Research approach**

This study qualitative research approach in an attempt to gain a detailed understanding of the social effects of natural disasters on small scale farmers. The rational for choosing the approach was due to its flexibility during data collection as participants are offered an opportunity to express themselves in detailed (Gill, Stewart, Treasure, & Chadwick, 2008; De Vos, Strydom, Fouché, & Delport, 2011, Bless, Higson-Smith, & Sithole, 2013). It provide to be an effective approach, as participants (small-scale farmers) were able to vividly provide social effects of natural disasters on them and their community at large.

### **Research design**

The researchers opted for case study research design. This design was chosen due to its ability to provide researchers with a contextual and in-depth information (De Vos et al., 2011). Other author, enunciated that case study design is effective when one attempt to understand how individual interpret and give meaning to their

situation (Simons, 2009) in this instance natural disasters. It is worth noting that case study design can be operated within exploratory or descriptive or even explanatory (Yin, 2014). However, in this study, the researchers used case study design operating within exploratory design. The rationale for choosing exploratory design is that it provided researchers with the ability to answer the “what” question (Neuman 2006; de Massis & Kotlar 2014). In this study, the question was, “what are the social effects of natural disasters on small scale farmers”.

### **Sampling technique and size**

The researcher opted for purposive sampling technique in order to sample small-scale farmers at Tzaneen Municipality. The municipality was chosen due to its vulnerability to natural disasters as depicted by Municipality (2014) and Shokane (2017) in their studies. In light of that, the researchers purposively sampled ten (10) participants who practice small scale farming at Runnymede village in Tzaneen Municipality. When using a purposive sampling, one should be mindful of fair selection of participants. It is for that reason that Greeff (2015) advised that the researcher should have an inclusion and exclusion criteria developed and be in line with the study aim. On that score, the study included participants who had or participate in activities at a small-scale plot and residing in Runnymede Village. Those who did not pose small-scale farming and/or residing at Runnymede Village were excluded in the study.

### **Data collection methods and analysis**

Given that this was an empirical paper, the data was collected through semi-structured focus group discussion. The researchers opted for focus group discussion as it is less expensive and allows researchers to look beyond the facts (Mansell, Bennett, Northway, Mead, & Moseley, 2004). This method allows or encourages participants to share in-depth information with other participants on the group. Moreover, since the data was collected during the pandemic, Coronavirus (Covid-19), the researchers adhered to health protocol during the data collection. Members who participated in the focus group discussion maintained 2 meters social distance, sanitized and they were all wearing masks throughout the proceeding. Moreover, the researchers received ethical clearance from Turfloop Research Ethics and permission to collect data from Limpopo Department of Social Development

Research Ethics Committee. The data collected in this study was analysed thematically using Thematic Content Analysis (TCA). Researchers used TCA due to its ability to identify the emerging themes from the transcripts (O’Leary, 2014). From this, the researchers used the themes developed to provide social effects of natural disasters on small-scale farmers.

## **FINDINGS AND DISCUSSION**

The findings that emerged during data collection are presented herein. In order to safeguard the identity of the participants and uphold the ethical principle of confidentiality, the researchers used pseudonyms, that is, Participants, instead of names of the participants. The findings are infused with the discussion.

### **Inaccessibility to their small-holding farms**

As already indicated that natural disasters can happen anywhere and anytime, small-scale farmers are not immune to the devastating disasters and repercussions. After the occurrence of natural disasters, small-scale farmers are unable to access their farming plots as natural disasters such as floods, earthquakes and cyclones would have destroyed their road infrastructure. These are corroborated by earlier findings released by United Nations Framework Convention on Climate Change [UNFCCC] (2014) which underscored that agricultural equipment, roads and bridges which are constructed in the plot get destroyed by natural disaster. To be precise, floods serve as obstacle to small-scale farmers that prevent them from accessing their small-holder farms. The following assertions give more insight

*“Floods leave us with damaged roads and as a result it makes it challenging for us to access our farms.”* (Participant 8, Small-scale farmer, FGD)

In the same vein, another small-scale farmer indicated that:

*“Natural disasters destroy our crops, houses, power stations and roads and other infrastructures. With regard to the roads, that makes it difficult*



*for us to access our plots, see the extent of the damage and plan what to do to improve the situation or recover.”* (Participant 10, small-scale farmer, FGD)

As already indicated that rurality on its own make individuals vulnerable to natural disasters, the occurrence of such disasters adds to their burdens. The above findings show that as a result of floods, small-scale farmers have a challenge in accessing their small-holding farms, making it difficult for them to feed their families. Eventually, inaccessibility to small-holding farms have indirect social effects such as poverty and increased unemployment as most people are likely to lose job as a result of poor production.

### **Homelessness**

There is no doubt that natural disasters – earthquakes, floods and cyclone, leave people homeless. Therefore, the severity of such an effect is not consistent, as the poor are mainly the ones who are left homeless as a result of natural disasters (Gaillard, Walters, Rickerby, & Shi, 2019). The researcher is quite aware that there are poor people who are without shelters, which is not the case here, as the researcher specifically refers to those in rural areas who lost their shelters as a result of a natural disaster (floods). Not so long ago, in Southern African countries - Zimbabwe, Mozambique and Malawi, cyclone Idai destroyed infrastructures in those areas, leaving community members homeless (Chatiza, 2019). On that scale, those who lost their houses, seek assistance from their relatives and community members while their homes were under repair. One of the small-scale farmers stated that:

*“We were affected by storms as they blew roofs of our houses away. Others (houses) collapsed because they were built using clay cricks that were not strengthened or hardened in kilns, hence they (houses) were not strong enough to withstand the storm.”* (Participant 8, Small-scale farmer, FGD)

The ongoing effects of floods and cyclones leave those under-resourced and under-developed communities homeless. In this study, it was confirmed that as a result of

natural disasters, community members are left homeless. This is due to the fact that people in low-resourced and under-developed areas, with low socio-economic conditions are unable to build shelters that are strong enough to withstand heavy storm. Therefore, in the aftermath of natural disasters, community members seek assistance from their relatives who may not have experienced the same hardship to find where to squat. Local people used proverbs such as “*bana ba motho ba ngathelana hlogwana ya tsie*” which gave an indication that people have to share the little that they have even when faced with natural disasters that left them homeless.

## **Displacement**

Over the past years, the concept of displacement was due to conflict and human right violation. But recently, as a result of global warming and climate change, people are forced to leave their homes, countries, and communities due to the occurrence of natural disasters (Ferris, 2008). This was the case in this study as community members indicated that floods have caused them to temporarily leave their homes as a result of cyclones and floods. One small-scale farmers shared that:

*“You see when floods swept our houses, we had to relocate. We had to move to the community hall and some of our family members got displaced to far areas and we were in the state of confusion during the disaster. We were allowed to return when it was deemed safe for us to return to our homes, though some never came back.” (Participant 1, Small-scale farmer, FGD)*

What should be underscored is that natural disasters result in the displacement of people. During crises caused by disasters, people move to any place as long as it is safe; hardly do they check other family members. On that score, Yonetani and Holladay (2012) reported that 42 million people in 2010 and 15 million people in 2011 were displaced due to sudden natural disasters (earthquake, floods and cyclones) as recorded by International Displacement Monitoring Centre. In those numbers, Asia and Africa emerged as the worst affected continents (Yonetani, & Holladay, 2012). With that in mind, the common denominator with these two continents is that they have a larger population, with Africa having many underdeveloped countries. In reaffirming the above assertion, almost two decades

ago, Rasmussen (2004) reported that poor countries had a larger population with weak infrastructure that makes them more susceptible to the rampage of natural disasters. This was later evident with the recent event; Cyclone Idai which hard-hit Zimbabwe and due to its poor and/or weak infrastructure about 51 000 people were displaced (Chatiza, 2019). This goes on to show that natural disasters, precisely floods, cyclones, earthquakes, and hurricanes cause a social disruption and as a result families are dislocated. This is due to the fact that when disasters erupt, the evacuation systems employed by people cause separation between and among families. The cause could be trimmed down to the fact that when disaster rescue systems are employed, they randomly ensure that everyone is put to safety disregarding who belongs where. In the process, many families may struggle to reunite.

### **Health-related risks**

When disasters such as floods erupt, water sources get contaminated and, in many instances, destroyed. As such, diseases such as malaria, cholera and diarrhoea are inevitable (World Health Organization, 2014) and have negative effects on flora and fauna. In terms of drought, (Chineka, 2016) conducted a study in Chiva South, Zimbabwe. In her study, Chineka (ibid) found that during drought, cattle are likely to catch foot and mouth disease. This goes on to show that natural disasters, whether cyclones, floods or drought, result in no production. This shows that community members experience health related risks directly and indirectly. In this study, community members experienced primary health related risk, that is, contaminated water, as a result of floods. However, the health risk on livestock is outside the scope of this study. Some of the participants, small-scale farmers, stated that:

*“You see the pampers there, during floods, those waste get eroded to the river and we depend on the river for our household’s water as well as irrigation.” (Participant 8, Small-scale farmer, FGD)*

Another small-scale farmer said:

*“We once had a heavy rainfall, afterwards our children had diarrhoea as they drank water from the tap. Others claimed that the water was brownish that is why we had stomach cramps.” (Participant 10, Small-scale farmer, FGD).*

In the ongoing, natural disasters also leave footprints of health-related risks such as water borne and vector borne diseases and community members are equally susceptible to these risks. From the findings, the community members indicated that due to floods, with poor water purification facilities, water got contaminated and this affected their health and livelihoods. During floods, water-borne diseases becomes pandemic and that compelled community members to seek medical help, and those who have means sent their members to private hospitals. Indirectly, such occurrences affect production and livelihood eventually.

### **Psychological effects**

The psychological effects in the aftermath of natural disasters are unavoidable and stress, depression, and post-traumatic stress disorder become common and affect people differently. Thus, Mamun et al. (2019) reported that after experiencing a disaster, whether man-made or natural, women have been seen as the most prone to showing signs of depression and emotional disturbance. The depression that women experience can be due to the responsibility that they have to care for their children while ignoring their own pains and losses. However, that does not mean men are immune to depression or mental disturbances. Men experience depression as they think of the ways to feed their children and other family members (Emslie, Ridge, Ziebland, & Hunt, 2006). Be that as it may, Mamun et al. (2019) reported that women have shown that they handle emotionally charged issues much better than men and they think on the long term basis more than men who think more on the present. Thus, with depression and stress from natural disasters, community members indicated that they endured more responsibilities as they had to look at their losses (dead crops and livestock) and also focus on feeding their family.

*“Floods and cyclones leave us stressed and with depression. We find ourselves perplexed as to how will we feed our families after our crops washed away and livestock drowned or died of diseases as the result of such calamity.” (Participant 9, Small-scale farmer, FGD).*

The fact that natural disasters by their nature are disruptive leave scars on the survivors. In this study, it was evident that natural disasters left community in the state of shock. It is during this time, that small-scale farmers need the assistance of professionals, be it social workers or psychologists. However, it should be noted that in the absence of professionals, community members have relied on, *Ndunas* as a source of strengths and support to assist them bounce back to their normality.

## **CONCLUSIONS AND RECOMMENDATIONS**

The researchers aimed to explore the social effects of natural disasters on small-scale farmers. This aim was achieved as the study established the effects of natural disasters were genuine and visibly affecting small-scale farmers in their communities. The participants indicated that due to natural disasters, they were unable to access their small-holding farms. The researchers concludes that due to destroyed bridges and roads, community members (small-scale farmers) were unable to access their small-holding farms. Accordingly, the study recommends better infrastructure and drainage systems to deal with heavy rainfall and avoid floods.

Again, it was confirmed that as a result of natural disasters, community members were left homeless. This is due to the fact that people in low-resourced and under-developed areas, with low socio-economic conditions are unable to build shelters that are strong enough to withstand heavy storm. The study concludes that community members are left homeless as their houses could not withstand heavy storm. As such, the researcher recommends that social workers should be active in disaster management preparedness, to use their assessment skills to identify those in need prior to natural disasters.

In this study, it was found that community members indicated that due to floods, without water purification facilities, water were contaminated, thereby compromising their health and livelihoods. The researchers concludes that community members were prone to diseases such as cholera which pushed them to seek medical assistance. As a result of that, the researcher recommends that community members should be educated about diseases that come with natural disasters such as floods. Moreover, public hospitals personnel should be increased and should offer same quality services offered in private institutions.

The fact that natural disasters by their nature are disruptive, there is no denying that they leave scar on the survivors. In this study, it was evident that natural disasters left community in the state of shock. In the absence of professionals, community members have relied on *Ndunas* as a source of strengths and support to assist them bounce back to normality. The researcher concludes that community members (small-scale farmers) experienced posttraumatic stress disorder after natural disasters. As such, it is recommended that social workers should work with psychologists to provide counselling to the victims and survivors of natural disasters.

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### **REFERENCES**

- Arnoldy, B. (2010). Pakistan floods wipe out more than 1 million animals – and farmers' livelihoods. *The Christian Science Monitor*, <http://www.csmonitor.com/World/Asia-South-Central/2010/0907/Pakistan-floods-wipe-out-more-than-1-million-animals-and-farmers-livelihoods> Accessed on 20 June 2021.
- Bless, C., Higson-Smith, C., & Sithole S.L. (2013). *Fundamentals of social research methods: An African perspective*. Juta & Company Ltd.
- Campbell, R., & Knowles, T. (2011). *The economic impacts of losing livestock in a disaster*, a report for the World Society for the Protection of Animals (WSPA), prepared by Economists at Large, Melbourne, Australia.

- Chapagain, T., & Raizada, M.N. (2017). Agronomic challenges and opportunities for smallholder terrace agriculture in developing countries. *Front Plant Science*, 8: 331. <https://doi.org/10.3389/fpls.2017.00331>
- Chatiza, K. (2019). Cyclone Idai in Zimbabwe: An analysis of policy implications for post-disaster institutional development to strengthen disaster risk management. Oxfam. DOI: [10.21201/2019.5273](https://doi.org/10.21201/2019.5273)
- Chineka, J. (2016). *Analysis of drought incidence, gendered vulnerability and adaptation in Chivi South, Zimbabwe* (Doctoral dissertation).
- De Massis, A., & Kotlar, J. (2014). The case study method in family business research: Guidelines for qualitative scholarship. *Journal of Family Business Strategy*, 5(1): 15–29.
- De Vos, A.S, Strydom, H, Fouché, C.B, & Delport, C.S.L. (2011). *Research at Grass Roots: For the social sciences and human service professions*. 4<sup>th</sup> ed. van Schaik Publishers.
- Emslie, C., Ridge, D., Ziebland, S., & Hunt, K. (2006). Men's accounts of depression: reconstructing or resisting hegemonic masculinity? *Social Science & Medicine*, 62(9), 2246-2257.
- Ferris, E. (2008, March). When disaster strikes: women's particular vulnerabilities and amazing strengths. In *Workshop on Social Dimensions of Climate Change* (Vol. 50).
- Gaillard, J. C., Walters, V., Rickerby, M., & Shi, Y. (2019). Persistent precarity and the disaster of everyday life: homeless people's experiences of natural and other hazards. *International Journal of Disaster Risk Science*, 10(3), 332-342.
- Gill, P, Stewart, K, Treasure, E, & Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups'. *British Dental Journal*, 204(6): 291–295. <http://doi.org/10.1038/bdj.2008.192>
- Greeff, M. (2015). *Ethics in health research: principles, processes and structures*. Cape Town: Department of Health.
- Mamun, M. A., Huq, N., Papia, Z. F., Tasfina, S., & Gozal, D. (2019). Prevalence of depression among Bangladeshi village women subsequent to a natural disaster: a pilot study. *Psychiatry research*, 276, 124-128.
- Mansell, I., Bennett, G., Northway, R., Mead, D., & Moseley, L. (2004). The learning curve: the advantages and disadvantages in the use of focus groups as a method of data collection. *Nurse Research*, 11(4):79-88.

- Matlakala, F.K. (2021). Nexus of social work and disaster management services: An Afrocentric perspective (unpublished thesis). University of Limpopo.
- Municipality, E. D. (2014). Integrated Development Plan 2014/2015', viewed 19 November 2019, from <http://www.westerncape.gov.za/text/2014/April/eden-draft-idp-2014-15.pdf>
- Neuman, W.L. (2006). Social research methods: qualitative and quantitative approaches. 6<sup>th</sup> ed. Pearson International Edition: USA.
- O'Leary, Z. (2014). *The Essential Guide to Doing your Research Project*. Sage Publications.
- Rasmussen, T.N. (2004). Macroeconomic Implications of Natural Disasters in the Caribbean. *International Monetary Fund*, 2004 (224): 1-25.
- Rock, L. F., & Corbin, C. A. (2007). Social work students' and practitioners' views on the need for training Caribbean social workers in disaster management. *International Social Work*, *50*(3), 383-394.
- Shokane, A. L. (2017). Development of a participatory community development practice model for rural communities affected by natural disasters (unpublished doctoral thesis). University of Johannesburg: South Africa.
- Simons, H. (2009). Case study research in practice. SAGE publications.
- United Nations Framework Convention on Climate Change [UNFCCC]. (2014). *Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November*, Decision 2/CP19. Warsaw: Poland.
- Wells, K. B., Springgate, B. F., Lizaola, E., Jones, F., & Plough, A. (2013). Community engagement in disaster preparedness and recovery: A tale of two cities—Los Angeles and New Orleans. *Psychiatric Clinics*, *36*(3), 451-466.
- World Health Organization (WHO). (2014). *Global status report on noncommunicable diseases 2014* (No. WHO/NMH/NVI/15.1). World Health Organization.
- Yin, R.K. (2014). Case Study Research: Design and Methods. Sage Publications: Thousand Oaks, CA.
- Yonetani, M., & Holladay, S. (2012). *Global estimates 2011, people displaced by natural hazard-induced disasters*. IDCM, NRC.
- Zulqarnain, Z. (2013). Economic Impacts of Floods on Small Scale Farmers of Pakistan: A case study from the district Nowshera, Khyber Pukhtunkhwa Province (Master's Dissertation). Uppsal





## ARTICLE 3

# CHALLENGES FACED BY SOCIAL WORKERS DEALING WITH VICTIMS AND SURVIVORS OF NATURAL DISASTERS

### Abstract

Social work practice is a very unique profession and its domain of practice has grown beyond the known traditional one. Due to its wider scope, social workers are seen as frontline workers during natural disasters. The aim of this paper was to explore the challenges faced by social workers dealing with victims and survivors of natural disasters. The study adopted qualitative research approach and exploratory research design. Five social workers were purposively sampled to form part of individual semi-structured interview from Tzaneen Municipality. Data was collected until the level of saturation and analysed thematically. The study revealed that social workers lack resources and proper training to deal with the victims and survivors of natural disasters. Moreover, the study found that there is poor inter-professional collaboration, role ambiguity and shortage of staff when disasters erupts. The study concludes that social workers are understaffed, have too much workload and are likely to experience burnout in their effort to assist victims and survivors of natural disasters. To that end, the study recommends that Department of Social Development should employ more social workers so that they can to respond during and after natural disasters.

**Keywords:** Social Work, Natural Disasters, Victims, Survivors, Inter-Professional Collaboration

### Introduction and problem formulation

Social work practice is a very unique profession and has a broader domain of practice. It plays a significant role especially in rural areas as it is the voice of the voiceless and marginalised population. Due to social work practice wider scope of practice, social workers are involved in environmental issues. Their mandate comes from social work professional association (National Association of Social Workers) and United Nations to care for the environment while others take their obligation or

responsibility from God (Hawkins 2010; Mosher 2010; Shaw 2011; McKinnon 2013; Smith 2013). The involvement of social workers in environmental justice comes from the fact that natural disasters affect the marginalised people and social workers have awareness of the interrelationships between humans and the biosphere (Besthorn 2012; Dylan 2012; Dylan & Coates 2012; Gray & Coates 2012; Dominelli 2014). Because of natural disasters, social ill such as poverty, lack of housing, health and child protection, and environmental degradation emanates. In line with that, Ramsay and Boddy (2017) posit that social workers should use their core social work values to respond and mitigate environmental degradation. In line with social work values of social justice and service delivery, social workers should advocate for social justice, against environmental abuse, and be able to provide vulnerable groups with social relief from distress (food parcels) during natural disasters.

Furthermore, social workers have the ethical obligation to enhance social welfare and to promote social justice for community members (Banks 2006). The catastrophic effects of natural disasters leave vulnerable groups without food and houses (Nyahunda, Matlakala & Makhubele 2019; Matlakala, Nyahunda & Makhubele 2021). It is thus the responsibility of social workers to advocate for the vulnerable group to be provided with social relief for distress. In other words, in the face of disasters, whether man-made or natural, social workers should provide essential services such as counselling to the victims and survivors of disasters. However, just like any profession, social workers encounter challenges that make it difficult for them to execute their mandate during and after natural disasters. Adams, Figley and Boscarino (2008) and Pulido (2007) state that social workers working with survivors of disaster face fatigues, burnout, and secondary traumatic stress. This is to be expected as some social workers lack experience in dealing with clients who have experienced trauma and they do not have sufficient resource support from government. This is supported by the findings of Bian, Wei, Feng, and Zhang (2009) who indicated that social work academics have done little research on disaster social work. On the same wavelength, Huang, Fu, and Wong (2014) aver that social workers lack supervision, support, cooperation, and coordination needed among agencies to address the ramification of climate change. Against this background, this paper was aimed at exploring challenges faced by social workers dealing with victims and survivors of natural disasters.

## Methods

The researchers used qualitative research approach in order to understand the challenges faced by social workers when dealing with victims and survivor of natural disasters. This approach was chosen due to its ability to describe the phenomenon in narrative fashion. Accordingly Vanderstoep and Johnston (2009), enunciated that the advantage of using qualitative research approach is that it provided the researchers with rich and in-depth information on the phenomenon. It is against this background that researchers were interested in finding the rich information through narratives on the challenges faced by social workers when dealing with victims and survivors of natural disasters. In order to solicit rich information, researchers opted for exploratory research design as it is used when little information is known about the phenomenon (Kumar 2011). Moreover, Yin (2014) averred that exploratory design is helpful in answering the question “what” in research. On that note, the researchers were interested in answering the question, ‘what are the challenges faced by social workers when dealing with victims and survivors of natural disasters?’. In answering the question, researchers purposively sampled five social workers from Tzaneen Municipality. When using purposive sampling or judgemental sampling techniques, the researchers use participants based on their qualities (Etikan, Musa & Alkassim 2016). On that note, the researchers chose social workers as they are frontline workers who aims to enhance the social functioning of individuals, families, and communities (Hepworth, Rooney, Rooney, & Strom-Gottfried 2016). As natural disasters cause disequilibrium, the victims seek help from welfare sector. It is for that reason that researchers sampled social workers who are providing social relief of distress in their community.

Data was collected by means of individual semi-structured interviews until the study reached the level of saturation. The researchers opted for semi-structured interviews due to their flexibility to allow the researchers to ask series of questions without being restricted by the data collection tool (Lune & Berg 2017). Then the collected data was analysed thematically using thematic content analysis. The researchers used TCA due to its ability to identify themes and/or patterns within the data (O’Leary 2014).

## **Description of the study area**

The study was conducted at The Greater Tzaneen Local Municipality, which is found in Mopana District. According to StatsSA (2011), the municipality consist of Tzaneen, Nkowankowa, Lenyenye, Letsitele and Haenertsburg town and 125 rural villages with almost 80% of households residing in rural villages. Moreover, the local municipality has a total population of 390 095 with 80% of the population residing in rural areas, among those in rural areas 5.7% of the population are the elderly. Mopani District Report (2007) avow that majority of the land which was privately owned was mainly used for commercial farming and a small portion was under the leadership of tribal authorities. However, this study was conducted at N'wa-Mitwa, Runnymede Village. The community was selected because it was convenient, and the District report also highlighted that the area was a lowveld area and exposed to floods and heavy rainfalls. Moreover, the village was chosen because of its accessibility and it is prone to floods and heavy rainfall (Mopani District Report, 2007).

## **Findings and discussion**

In this study, the following themes emerged, lack of resources, lack of training, poor-inter-professional collaboration, role ambiguity and shortage of staff members. The highlighted themes are discussed herein.

### **Lack of resources**

Social workers have a responsibility of ensuring the wellbeing of individuals, families, and communities. Likewise, during natural disasters, social workers serve as frontline workers to ensure that victims and survivors of natural disasters are provided with services such as counselling. However, social workers cannot fulfil their mandate due to lack or insufficient resources at their disposal. Resources refer to anything that an individual need to accomplish the task or goal (Halbesleben, Neveu, Paustian-Underdahl, & Westman 2014). In this study, participants, social workers indicated that they cannot assist community members due to lack of capital resources (stationery and vehicles). One possible reason for the lack of financial support was documented by Gray and Mueller (2012) who postulated politicians have cut the financial support for social workers due to their narrow mind and their lack of understanding of the role of social workers amidst natural disasters. As such,

they do not see the need to put money in social development programmes as they believe they do not contribute to the economic growth of the county. This has adversely made social workers to lack stationery for record-keeping and vehicle to conduct home visits to survivors and victims of natural disasters. One of the key informants, a social worker, shared that:

*“The main challenge that we encounter is lack of resources, such as a car. When we have to go to the field and assist families, you find that there is not even one single car available for home visit.”* (Participant 3, Social Worker)

In corroboration, another social worker said:

*“We provide social relief of distress and counselling to victims of natural disasters. But sometimes we are unable to go to rural communities to provide victims of natural disasters with counselling as we do not have enough cars in our disposal.”* (Participant 5, Social Worker)

In every department or career, tools of trade are of the utmost importance. Their availability encourages one to go an extra mile in rendering the services. However, social workers have limited financial support, which is a bad for service delivery (Skhosana, Schenck, & Botha 2014). Nielsen, Nielsen, Ogbonnaya, Käsälä, Saari, and Isaksson (2017) pointed out that productivity and organisation growth can be achieved as a result of the availability of resources at employees' disposal. In essence, the unavailability of resources makes it impossible for social workers to visit the victims and survivors of natural disasters in rural areas and provide them with social relief of distress.

### **Lack of training**

Social work profession prides itself on enhancing the social wellbeing of the individuals, families, and communities. More so, the profession is anchored on an evidence-based approach. However, several authors globally have seen that there is a dearth of literature on the training of social workers when dealing with victims of natural disasters (Chou 2003; Rock & Corbin 2007; Bian *et al.* 2009). Due to a lack of training, social workers cannot sharpen and improve their skills when dealing with victims of disasters. In this study, participants expressed the desire to gain more

training on how to deal with victims of disasters, be it man-made or natural. One of the social workers stated that:

*“As Social Workers we lack knowledge on how to deal with the victims of natural disasters. We need more training on natural disaster to respond effectively.”* (Participant 1, Social Worker).

Learning is a continuous process, workshops and research are designed to broaden the knowledge of individuals. The above findings show that social workers are not knowledgeable and lack skills to assist victims of natural disasters. On that note, Rasool (2020) documented that social workers are the untapped resource in South Africa during and after natural disasters. But it is not that they are an untapped resource; social workers lack training.

### **Poor Inter-professional collaboration**

Social work, just like any other profession, does not work in an isolation; it has other professions that support and work with it for the wellbeing of clients. To Craven and Bland (2013), collaborative care involves different professionals coming together to provide care to individuals and families. The benefit of collaborating is that it eradicates barriers among professions, combine skills and expertise from different professions that could assist in early, effective intervention strategies, in this context disaster preparedness strategies (Glaser & Suter 2016). With the enormous benefit of collaboration, for centuries social workers have been collaborating with health care practitioners (Auslander 2001; Cleak & Turczynski 2014) and as such their collaboration is also visible amidst natural disasters (Ambrose-Miller & Ashcroft 2016). However, that does not mean all professions collaborate for the well-being of the community members even amid natural disasters. In attempting to answer the reason for lack of collaboration, Mandy, Milton, and Mandy (2004) found that lack of inter-profession collaboration is as a result of stereotypical rivalry between professions. In essence, other professions want to appear more effective than others at the expense of those they serve. This is as a result of colonial and apartheid legacy where, it was emphasised that each profession must focus on its mandate, negating the relevance and applicability of other professionals. For instance, there is a dearth of literature that shows the collaboration between social workers and disaster management team. In this study, some of the social workers shared that:

*“During disasters, we do not work with the disaster management team. The only institutions that we collaborate with are psychologists, chiefs and Indonas.”* (Participant 2, Social Worker)

Another participant, social worker said that:

*“We hardly collaborate with the disaster management team. The disaster management is found in municipality which is the oversight of the municipality. So they do not work with us and some of the things they do without our knowledge through ward councillors.”* (Participant 3, Social Worker)

When asked of the benefits that could be gained as a result of inter-professional collaboration, the participant (social worker) indicated that:

*“For me, there is no master in these things so the best way is to learn from each other. I admit that inter-professional collaboration is very essential because through collaboration we can share best practices and collective measures that would foster resilience in our clients in the wake of disasters”* (Participant 5, Social Worker)

There is no doubt that natural disasters have an enormous impact on the livelihood of individuals. After experiencing disasters, be it man-made or natural, victims and survivors experience posttraumatic stress disorder, anxiety, depression, amongst others and it is during this time that they need social workers to provide them with psychosocial counselling. However, in this study, it was mentioned that the disaster management team did not collaborate with social workers at a local level. This indicates that the disaster management team just evacuate community members and leave them without visible support and later communicate with the district, as they do not collaborate with social workers and/or psychologists. This might be good but it should have been done during planning for evacuations and post evacuations so as to minimise the psychosocial impact. In their role, they forget the principle of co-existence and as a result, victims and survivors are left to deal with their mental challenges alone. In terms of one of the key tenets of Vulnerability Theory (capabilities), there are resources in the community that protect the community members from being exposed to impacts of natural disasters. In this instance, not only does inter-professional collaboration promote co-existence



amongst profession it also provides community members with sufficient human resource after and during natural disasters.

### **Role ambiguity**

Social workers are at the forefront of providing services during and after natural disasters. However, there is no clear definition or explanation of the role that they should play during natural disasters, thus leading to role ambiguity. McCormack and Cotter (2013) found that there is an association between burnout and role ambiguity. This is because when natural disasters erupt, social workers find themselves not knowing which role they should assume. To Wacek (2017) social workers overwork themselves because they do not do what is expected of them due to the inability of their employers to explain their roles. As a result of role ambiguity, social workers are also prone to the stress-generating situation where they overload themselves with responsibilities (Wacek 2017). More so, when they are dealing with a victim of natural disasters, they might be unable to tell if they being appreciated and acknowledged or not. One key issue about the role ambiguity is the lack of harmonisation of policies governing disaster management from different stakeholders. There is no uniform approach across professions, hence the challenge of role ambiguity. On that score, they will not efficiently provide the desired service, leading to their competence being questioned. In the study, one of the participants stated that:

*“We are not given a clear definition on our roles as social workers during and after natural disasters. Even in our performance agreement, our role in disaster planning, preparedness and response is not even mentioned.”*  
(Participant 4, Social Worker)

Victims and survivors of natural disasters are fragile and emotional. It is during that time that harm can be created by a social worker who lacks confidence or who is uncertain of his or her role. In this study, social workers indicated that their role during and after natural disasters remains unclear. It is for that reason that it can be deduced that disaster management should be included in the social work profession.

## Shortage of staff

The performance of an organisation is dependent on the availability of competent staff and it is equally so in the social work profession. Social work is a profession that has been declared as skill-scarce and has insufficient professional to effectively provide services (Goliath, 2018; Skhosana 2020). In a study conducted by Curtis, Moriarty and Netten (2009) found that social work is even listed in the national occupational list. As a result of the shortage of staff (social workers), Department of Social Development (2009) reported that they were unable to implement policies that were aimed at addressing social issues such as food insecurity. In an attempt to close the gap of lack of staff members, Department of Social Development embarked on recruitment drive to get new students to be trained and equipped with required skills to provide services to community members. However, Skhosana (2020) states that the gap even to date is not closed as there are social work graduates who are unemployed and social workers who are employed and are unable to breathe due to heavy workload. As a result of the department's inability to employ social workers, vulnerable groups are at a greater risk of harm caused by the impact of natural disasters. In this study, it became visible that there was insufficient number of social workers. One of the social workers stated that:

*“Staffing is a big challenge for us, like right now I have three big communities that I am struggling to meet the demands as I have too many cases that needs my urgent attention.” (Participant 1, Social Worker)*

On the same wavelength, another social worker stated that:

*“We have a backlog due to high volume of cases and few social workers. This result in low quality of our job because we focus more on quantity than quality.” (Participant 3, Social Worker).*

Shortage of staff member lead to heavy workload on the shoulders of social workers which makes them unable to keep up with cases. In this study, the participants indicated that they were overwhelmed with workload that leads to backlog of cases. As a result, social workers cannot provide quality work as they are struggling to keep up with the number of communities to serve and become unable to respond to emergencies on time. Thereby, due to workload and shortage of staff,

social workers are more likely to experience burnout in the task of assisting victims and survivors of natural disasters.

## **Conclusion**

The researchers found that there is plethora of challenges that social workers experience when dealing with victims of natural disasters. Firstly, social workers do not have resources (tools of trade) to do their work. In light of that, recommends that social workers should be provided with tools of trade to be able to provide professional support and counselling to victims and survivors of natural disasters in rural areas. Secondly, social workers are not knowledgeable and lack skills to assist victims of natural disasters. On that note, the researchers recommend that social workers should be provided with training through workshop on how to deal with victims and survivors of natural disasters. Thirdly, there is no co-existence or collaboration amongst different profession on the local level. Thus, it is recommended that there should be an inter-professional collaboration of social workers, disaster management officers and community workers in disaster preparedness, during and after natural disasters on a local level. Fourthly, social workers have uncertainty in terms of roles that they should perform prior, during and after natural disasters. As a result of that, they end up perform various roles that predispose them burnout. Therefore, the study recommends that social workers should be given clear roles that they should use when dealing with victims and survivors of natural disasters. Lastly, social workers were understaffed and had too much workload and were likely to experience burnout in their effort to assist victims and survivors of natural disasters. To that end, the study recommends that Department of Social Development should employ more social workers so that they can to respond during and after natural disasters.

## **Limitation of the study**

The authors do not generalise the findings due to their small size and the nature of the research approach. Again, the findings were from social workers who offer their services in Tzaneen Municipality under Mopani District.

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## References

- Adams, R. E., Figley, C. R., and Boscarino, J. A., 2008. The compassion fatigue scale: Its use with social workers following urban disaster. *Research on Social Work Practice*, 18(3): 238-250.
- Ambrose-Miller, W., and Ashcroft, R., 2016. Challenges faced by social workers as members of interprofessional collaborative health care teams. *Health & social work*, 41(2): 101-109.
- Auslander, G., 2001. Social work in health care: What have we achieved?. *Journal of Social Work*, 1(2): 201-222.
- Banks, S., 2006. *Ethics and Values in Social Work*. Palgrave Macmillan.
- Besthorn, F., 2012. 'Radical equalitarian ecological justice: A social work call to action', in M. Gray, J. Coates and T. Hetherington (eds), *Environmental Social Work*, pp. 31–45. Routledge.
- Bian, H. M., Wei, K. N., Feng, H., and Zhang, Q. W., 2009. A study of social workers' involvement in the relief and reconstruction efforts following the 5.12 Wenchuan Earthquake. *China Journal of Social Work*, 2(3): 211–219.
- Chou, Y. C., 2003. Social workers involvement in Taiwan's 1999 earthquake disaster aid: Implications for social work education. *Social Work & Society*, 1(1): 14-36.
- Cleak, H. M., and Turczynski, M., 2014. Hospital social work in Australia: Emerging trends or more of the same?. *Social work in health care*, 53(3): 199-213.
- Craven, M. A., and Bland, R., 2013. Depression in primary care: current and future challenges. *The Canadian Journal of Psychiatry*, 58(8): 442-448.
- Curtis, L., Moriarty, J., and Netten, A. 2010. The expected working life of a social worker. *British Journal of Social Work*, 40(5): 1628-1643.
- Department of Social Development., 2009. *Annual Report for the year ended 31 March 2010*. Government Print.

- Dominelli, L., 2014. 'Promoting environmental justice through green social work practice: A key challenge for practitioners and educators'. *International Social Work*, 57(4): 338–45.
- Dylan, A. and Coates, J., 2012. 'The spirituality of justice: Bringing together the eco and the social'. *Journal of Religion & Spirituality in Social Work: Social Thought*, 31(1–2): 128–49.
- Dylan, A., 2012. 'Rethinking sustainability on planet Earth: A time for new framings'. *Electronic Green Journal*, 1(34): 1–16.
- Etikan, I., Musa, S. A., and Alkassim, R. S., 2016. Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, 5(1): 1-4.
- Glaser, B., and Suter, E., 2016. Interprofessional collaboration and integration as experienced by social workers in health care. *Social work in health care*, 55(5): 395-408.
- Goliath, J., 2018. *Management functions of frontline social workers supervising social auxiliary workers* (Doctoral dissertation). Stellenbosch: Stellenbosch University.
- Gray, C. L., and Mueller, V., 2012. Natural disasters and population mobility in Bangladesh. *Proceedings of the National Academy of Sciences*, 109(16): 6000-6005.
- Gray, M., and Coates, J., 2012. 'Environmental ethics for social work: Social work's responsibility to the non-human world'. *International Journal of Social Welfare*, 21(3): 239–47.
- Halbesleben, J. R., Neveu, J. P., Paustian-Underdahl, S. C., and Westman, M., 2014. Getting to the "COR" understanding the role of resources in conservation of resources theory. *Journal of management*, 40(5): 1334-1364.
- Hawkins, C., 2010. 'Sustainability, human rights, and environmental justice: Critical connections for contemporary social work'. *Critical Social Work*, 11(3): 68–81.
- Hepworth, D. H., Rooney, R. H., Rooney, G. D., and Strom-Gottfried, K., 2016. *Empowerment series: Direct social work practice: Theory and skills*. Cengage Learning.
- Huang, Y., Fu, Y., and Wong, H., 2014. Challenges of social workers' involvement in the recovery of the 5.12 Wenchuan Earthquake in China. *International Journal of Social Welfare*, 23(2): 139-149.

- Kumar, R., 2011. *Research methodology: A step-by-step guide for beginners*. New Sage Publications Limited.
- Lune, H., and Berg, B. L., 2017. *Qualitative research methods for the social sciences*. 9<sup>th</sup> edition. Pearson.
- Matlakala, F.K., Nyahunda, L., and Makhubele, J.C. 2021. "Populations vulnerability to natural disasters in Runnymede village at Tzaneen local municipality, South Africa." *Humanities & Social Sciences Reviews*, 9(4): 160–166. <https://doi.org/10.18510/hssr.2021.9423>
- Mandy, A., Milton, C., and Mandy, P., 2004. Professional stereotyping and interprofessional education. *Learning in Health and Social Care*, 3(3): 154-170.
- McCormack, N., and Cotter, C., 2013. *Managing burnout in the workplace: A guide for information professionals*. Elsevier.
- McKinnon, J., 2013. 'The environment: A private concern or a professional practice issue for Australian social workers?' *Australian Social Work*, 66(2): 156–70.
- Mopani District Report. 2007. Mopani District Municipality Annual Report 2006 – 2007. [http://www.mopani.gov.za/docs/reports/ANNUAL%20REPORT%202006-07\\_financial.pdf](http://www.mopani.gov.za/docs/reports/ANNUAL%20REPORT%202006-07_financial.pdf) Date of Access; 01 November 2019.
- Mosher, C. R., 2010. 'A holistic paradigm for sustainability: Are social workers experts or partners'. *Critical Social Work*, 11(3):102–21.
- Nielsen, K., Nielsen, M. B., Ogbonnaya, C., Känslä, M., Saari, E., and Isaksson, K., 2017. Workplace resources to improve both employee well-being and performance: A systematic review and meta-analysis. *Work & Stress*, 31(2): 101-120.
- Nyahunda, L., Matlakala, F.K., and Makhubele, J. C. 2019. "Role of social workers in mitigating the effects of climate change in Makonde communal lands, Zimbabwe." *e-Bangi: Journal of Social Sciences and Humanities* 16 (9): 172 – 183.
- O'Leary, Z., 2014. *The Essential Guide to Doing your Research Project*. Sage Publications
- Pulido, F., 2007. Phenotypic changes in spring arrival: evolution, phenotypic plasticity, effects of weather and condition. *Climate Research*, 35(1-2): 5-23.
- Ramsay, S., and Boddy, J., 2017. Environmental Social Work: A Concept Analysis. *British Journal of Social Work*, 47: 68–86. <https://doi.org:10.1093/bjsw/bcw078>
- Rasool, S., 2020. *Social workers are an untapped resource to address the psychosocial effects of Covid-19*. Mail & Guardian. Retrieved

- from <https://mg.co.za/article/2020-04-13-social-workers-are-an-untapped-resource-to-address-the-psychosocial-effects-of-covid-19>
- Rock, L. F., and Corbin, C. A., 2007. Social work students' and practitioners' views on the need for training Caribbean social workers in disaster management. *International Social Work*, 50(3): 383-394.
- Shaw, T. V., 2011. 'Is social work a green profession? An examination of environmental beliefs', *Journal of Social Work*, 13(1): 3–29.
- Skhosana, R. M., 2020. The dilemma faced by NPOs in retaining social workers: a call to revisit the retention strategy. *Social Work*, 56(2): 109-124.
- Skhosana, R., Schenck, R., and Botha, P., 2014. Factors enabling and hampering social welfare services rendered to street children in Pretoria: Perspectives of service providers. *Social Work*, 50(2): 213-236.
- Smith, R. J., 2013. 'A social worker's report from the united nations conference on sustainable development (Rio p 20)'. *Social Work*, 58(4): 369–72.
- Statistics South Africa [StatsSA]. 2011. General Household Survey 2011 [dataset]. Version 2. Pretoria. Statistics South Africa [producer], 2011. Cape Town: DataFirst [distributor], 2011. Available at: <http://www.datafirst.uct.ac.za/dataportal/index.php/catalog/192> (Accessed 2016 September 2019)
- Vanderstoep, S. W., and Johnston, D. D. 2009. *Research methods for everyday life: Blending qualitative and quantitative approaches*. Jossey-Bass.
- Wacek, B. 2017. Factors which put social workers at a greater risk for burnout. *Social Work Master's Clinical Research Papers*. 811 [https://ir.stthomas.edu/ssw\\_mstrp/811](https://ir.stthomas.edu/ssw_mstrp/811)
- Yin, R.K., 2014. *Case Study Research: Design and Methods*. Sage Publications, Kindle ed., Thousand Oaks, CA.

# ARTICLE 4

## POPULATION VULNERABLE TO NATURAL DISASTERS IN RUNNYMEDE VILLAGE AT TZANEEN LOCAL MUNICIPALITY, SOUTH AFRICA

### *Abstract*

There is growing concern of the natural disasters around the globe, with those in underdeveloped communities being vulnerable. This paper was aimed at determining the population vulnerable to natural disasters in Runnymede Village at Tzaneen Local Municipality, South Africa. The researchers used qualitative research approach and exploratory research design. A total number of 16 participated in this study. The participants consisted of small-scale farmers, social workers and disaster management member. Data was collected by means of individual semi-structured and focus group interviews. Data was then analysed thematically. The study found that impoverished people in the rural areas, people living with disabilities, children and women are mainly vulnerable to natural disasters. The study thus conclude that people in rural areas are more prone to the impact of natural disasters due to geopolitical, structural and culture systems. On that score, it is recommended social workers, due to their educational background, should fight the injustices that people in rural areas are predisposed to and they could challenge those injustices (inequalities) as those infringe on individual's rights to dignity and other associated rights.

**Keywords:** climate change, children, disabilities, natural disasters, rural areas, women.

### **INTRODUCTION AND PROBLEM STATEMENT**

With the growing threat of climate change and climate-related disasters, it is imperative that communities be empowered to reduce their vulnerability. In support, several authors have underscored that the vulnerability of rural communities and developing countries to climate-related disasters is as a results of poor adaptation strategies (Jagtap, 2007; Nwafor, 2007; Enete & Achike, 2008; Nyahunda &



Tirivangasi 2019, Matlakala, Makhubele & Nyahunda, 2021). Furthermore, Ndaki (2014) wrote that developing countries' inability to cope with the effects of climate change is due to lack of financing for climate change adaptation. This is in respect to the fact that Easton and Sommers (2003) earlier reported that government is entrusted with funds to develop along with societies' ideas and programmes to be used to develop policies that can address the needs of people. Nyahunda and Tirivangasi (2019) state that members of the ruling political structure are the ones who receive preference compared to vulnerable community members. As such, social workers should advocate for equal distribution of resources needed to respond to the effects of climate change, especially for the vulnerable groups in rural areas.

Given poor adaptation strategies and poor communication status in rural communities, there is a high poverty rate and poor agricultural production. This was supported by Conway (2009) who stated that agriculture and mining sector's rural communities are faced with high unemployment and low productivity. This leads to poverty arising from instability in the economy as a result of unpredictable weather conditions. In the same vein, Bisht (2013) further articulated that in rural communities, due to water shortage, there is crop failure and death of livestock. It is for that reason that Turpie and Visser (2013) and Nyahunda and Tirivangasi (2019) positioned rural communities as the most vulnerable population to the effects of climate change as they mainly depend on agriculture for survival.

Mahiya and Gukurume (2014) state that majority of studies conducted on the effects of climate change have been focusing on urban areas and disregarding challenges faced by rural areas in mitigating the effects of climate change. However, it is of late that Nyahunda and Tirivangasi (2019); Nyahunda, Makhubele, Mabvurira, and Matlakala (2020) and Matlakala et al. (2021) conducted studies on the challenges faced by rural communities and they state that rural communities experience declines in agricultural production, economic productivity and an increase in poverty and food insecurity as a result of climate change. As such, the first departure point in making communities deal with the effects of climate change is by addressing the issue of poverty (Brooks & Loevinsohn, 2011; Nyahunda & Tirivangasi 2019). In light of the above, this paper was aimed at determining **population vulnerable to natural disasters in rural communities at Tzaneen Local Municipality, South Africa.**

## **RESEARCH METHODOLOGY**

This study adopted a qualitative research approach due to its ability to ensure participants provide an in-depth information on the phenomenon. According to Kumar (2011), qualitative research approach is ideal when one attempts to gain rich information from participants as it allows flexibility during data collection process. The researchers opted for exploratory research design as they wanted to gain a contextual in-depth information about the population that is vulnerable to natural disasters. According to de Vos et al. (2011), exploratory design is used when little is known about the phenomenon. In this case, there is dearth of information on population that is vulnerable to natural disasters, especially in deprived communities.

The participants were sampled using purposive sampling technique. Purposive sampling technique is used when researcher purposively select participants that will help him or her to meet the research aim (De Vos et al., 2011). As such, in this study, researchers purposively selected five (5) social workers as key informants as due to their scope of practice and their role during natural disasters (providing psychosocial support and social relief of distress) (Zastrow, 2017). Moreover, the SANDF (2005) called for them to actively participate in the issue of natural disasters. Ten (10) small-scale farmers were purposively selected to form part of this study as community members due to their accessibility, availability and their vulnerability to disasters when executing their activities. Lastly, one disaster management member was included in the study as a key informant to share information on his line of duty.

Data was collected through individual semi-structured interviews and focus group discussion. Individual semi-structured interviews was used with social workers and disaster management member for a period of 4 days. Focus Group Discussion (FGD) was used to collect data from small-scale farmers. In this study, the researchers used Thematic Content Analysis to analyse data. According to O'Leary (2014), Thematic Content Analysis is a method of identifying, analysing and reporting patterns (themes) within the data. It minimally organises and describes data set in (rich) detail. The researchers chose Thematic Content Analysis due to its ability and potential to further interpret and highlight emerging themes and aspects pertaining to social workers' intervention during natural disasters.

## **ETHICAL CONSIDERATION**

The researchers received ethical clearance from Turfloop Research Ethics (TREC). In this study, the researchers used individual semi-structured interviews to collect data from social workers. During data collection, the researchers followed the health precaution measures put in place by National Commander Council of Corona Virus regulations, the researchers ensured that all participants wore a face masks, sanitised and maintain 2 metre distance during the interview. Moreover, those with underlying health condition were requested to declare prior the interview and were allowed to withdraw from the study without penalty.

## **FINDINGS AND DISCUSSION**

Under-development in terms of technological backlashes, economic constraints, low educational levels, poor infrastructural development, and dependence on livelihoods susceptible to natural disasters form an interplay of factors behind the vulnerability of Runnymede village to natural disasters. In light of this, it emerged that vulnerability to natural disasters can be compartmentalised according to demographic variables. That being the case, there was an acknowledgement that children, women, and people with disabilities were susceptible to natural disasters with no exception. On that note, the participants had mixed views in explaining vulnerability to natural disasters amongst these populations.

### **The impoverished people in rural areas**

The gap between the rich and the poor has widened in Africa, and South Africa is not an exception because it is a developing country. In particular, the one bearing the brunt are those who reside in rural areas. The unbearable conditions are compounded by inequalities and patriarchal systems entrenched through cultural norms, values, and practices. In addition to that, the occurring and recurring of natural disasters exacerbate the calamity of people in rural areas. Such challenges experienced by rural people are geopolitical and structural as Nyahunda (2020) posits that in South Africa, apartheid regime relocated people to poor, dry, and barren land that are more prone to natural disasters. However, researchers does not dispute the sentiments of the latter author but believes that in addition to geopolitical

and structural factors, cultural (patriarchal) factors played a major role in contributing to people's location in rural areas. Narratives of the older persons purport that what is actually dry, barren areas, used to receive good rainfall and their plaguing was rain-fed.

As such, it can be deduced that due to geopolitical, structural (apartheid system) and cultural systems compounded by unpredictable natural disasters, people in rural areas find themselves under-resourced and underdeveloped. In support, the small-scale farmer stated:

*“We were forcefully removed from fertile land and be dumped here in this dry, barren land. We have to survive under these conditions and come up with ways or strategies to survive in such a dry land.”* (Participant 5, small-scale farmer, FGD).

In corroboration, another small-scale farmer echoed that:

*“As we are in dry land, our parents taught us that for us to know that there would be enough rain to plough the land, we used to observe ants as they predicted rainfall. We would know when to start tilling the land after such observations.”* (Participant 7, small-scale farmer, FGD)

In relation cultural factors in particular patriarchal system, another small scale farmer stated that:

*“It has been a norm and practice that women have no ownership when it comes to land, theirs is to plough and those who were on their menstrual periods were not allowed to enter the fields as the practice or custom is that they will have spell to the harvest.”* (Participant 8, small-scale farmer, FGD)

Of all the views of the Social Workers on this issue of rural people affected by natural disasters, the most striking one was of the Social Worker who said that:

*“Rural people who experience natural disasters end up being impoverished, however, mostly are women who, culturally, are not allowed to own the land. One should also be careful as other groups such as women and children as a result of natural disasters, bear the price of poverty and unemployment is very rife. In addition, psychosocial ills are the offshoots of these conditions.”* (Participant 13, social worker)

In support, disaster management officer concurred that people in rural areas were impoverished. He stated that:

*“People in rural areas are mainly affected by natural disasters [showed picture of areas that they assisted]. After disasters, we write a post-disaster assessment report whereby we request the Human Settlement Department to assist the impoverished people with temporary shelter”* (Participant 16, Disaster Management Officer)

The above findings show that due to geopolitical, structural (apartheid), and cultural systems, rural participants found themselves in impoverished areas which predisposed them to natural disasters. In line with the key tenet of Vulnerability Theory (liability), the susceptibility of participants was as the result of occupying areas that were unsafe for human habitation and not fertile for agricultural purposes. In the terrain of social work practice, social workers are well positioned to fight the injustices that women are predisposed to and they could challenge those injustices (inequalities and patriarchal systems in relation to land ownership) as these infringe on women’s rights to dignity and other associated rights.

### **People living with disabilities**

Given the fact that dry, infertile land where people reside predispose community members in general and small-scale farmers in particular to natural disasters. There are other community members who experience second degree impact of natural disasters; amongst those are people living with disabilities. The findings below indicate that persons living with disabilities were exposed to an unfriendly environment; for instance, a disabled man was found staying in a hut that did not

have a roof and obviously was vulnerable, left alone to natural disasters such as floods and hailstorm, if they occurred. One of the small-scale farmers narrated the following:

*“There is someone living with a disability (paraplegic) in this village. The condition of the house he lives in is in appalling condition, one could see through the roof of the house. Seemingly his significant others are not taking care of him. He was supposed to benefit from the government emergency housing programme which never materialised. So that person is still in need.”* (Participant 2, small-scale farmer, FGD).

In line with the above assertion, one of the key informant (Disaster Management Officer) averred that people living with disabilities are vulnerable to natural disaster. The following assertions were shared:

*“Due to their immobility, people with disabilities, especial those who depend on people to move around are more vulnerable to natural disasters. When they [people living with disability] experience a sudden disaster, due to their disability, they fail to move to a place of safety quickly. When coming to evacuate them, we also face a challenge as we have to carry those on the wheelchair to a safer place which is not easy.”*  
(Participant 16, Disaster Management Officer)

People living with disabilities are in most instances disadvantaged by the environment in which they find themselves. More often than not, they are rejected by their able relations. In addition, there is no visitation or care from family members and friends as espoused by the philosophy of Ubuntu. In a study conducted by Coates (2014), it was revealed that people living with disabilities, whether acquired from birth or accident, experience hardships and find it difficult to carry out day to day activities. For the reason that they are unable to participate in community activities, they end up being isolated and unable to flourish in life. This corroborates the previous findings by Coate (ibid), as mentioned earlier about an individual who was on wheelchair and residing alone in a hut “*roundavel* house”. The individual was told he could not receive a government funded house (commonly known as

RDP house) as he is receiving disability grant. The reason being he cannot dip twice into government coffers.

Putting it in context of the vulnerability theory, one of the key tenets (capabilities) stresses that the protective factors make individual to be resilient to natural disasters. In this instance, it is expected that the extended family will serve as a buffer against odds. Moreover, the person on wheelchair needs social support system for livelihood and its absence makes him doubly susceptible to natural disasters. This was substantiated by Zakour (2010) who stated that people with disabilities and those with mental disorders are more susceptible to natural disasters than those with none. In addition, due to the disability of the individual, he may have challenges in comprehending, for instance, early disaster warning signs and his property may be destroyed.

The individual might not be aware that social workers, given their educational background, are well placed to advocate for him to access services. Zakour and Gillespie (2013) propound that social workers should use their skills and roles to provide services and maximise the safety of individuals in their community. As it is, the individual is not safe and has not received services; and this infringes on his right to human dignity. It is for that reason that researchers believe the social worker should assume the role of an advocate and assist the person to get a government funded house.

## **Children**

Children are the future of any nation – herein defined according to Children's Act 38 of 2005 as persons under the age of 18, and represent a portion of those significantly enduring the impact of natural disasters much like the disable people. Be that as it may, researchers continue to overlook the experiences of children and needs during natural disasters. The above assertion of the exclusion of children in research is well captured by La Greca and Prinstein (2002), who stated that researchers assume that children cannot be affected by disasters and that their reaction is short-lived. Furthermore, Anderson (2005) highlighted that research on disasters overlook children due to socio-cultural and structural processes in the

society. In other words, those who do research on children find it difficult due to the tedious process they have to follow. However, the truth of the matter is that no one is immune to natural disasters irrespective of age, gender, creed, sex or sexual orientation. Evidently, Peek (2008) reported that there would be an increase in the number of children affected by natural disasters in the twenty-first century. In this study, a social worker stated that:

*“During the occurrence of natural disasters, we realised that children are affected and it is very painful as some end up losing their school books, clothes and their parents sometimes have to be relocated to the safer place far from their school.”* (Participant 12, Social Worker)

In addition, another social worker reported second-degree impact of natural disasters on children and she stated that:

*“Children become scared during disasters and aftermath of the disaster, manifestations of posttraumatic stress disorder, anxiety, delusion are evident.”* (Participant 14, Social Worker)

On the same wavelength, another social worker reported that:

*“Children as a result of second degree impact of natural disasters, due to its nature of emergency, without proper shelters, some are victims of domestic violence, rape and sexual assaults.”* (Participant 15, Social Worker)

Another key informant, Disaster Management Officer, avowed that:

*“When there is a sudden flood, children cannot quickly think of ways to save themselves. This comes down to their inability to respond to natural disasters due to lack of capacity to make rational decisions.”* Participant 16, Disaster Management Officer)



The above findings point out that children experience the impact of natural disasters just like any other person. Equally, they lose their valuables in the process. As a result of natural disasters, children are traumatised and experience posttraumatic stress disorder. This study affirmed the findings of Fernandes, Boehs, Denham, Nitschke, and Martini (2017), who averred that natural disasters cause trauma of individuals, families, and communities. In the case of loss of life as a result of natural disaster, children may be faced with the new reality of living without with parent(s) and that is a natural disaster secondary impact. During such events, disaster management teams are called to provide services ranging from evacuation, relocation to safe places in collaboration with other key stakeholders like health providers to provide emergency medical health services and social welfare for food distribution. Sometimes, external family members normally will come and provide protection, care, and support for the affected children.

## **Women**

Women are the custodians of families who rear children, till the land, and ensure that basic needs are met. Traditionally, women's roles have been in the kitchen but with industrialisation, women are in leadership and head families. In spite of the invaluable roles they play in a society, particularly in rural areas where patriarchy still rears its head, natural disasters adds burden to them. For those women who are in agricultural sector – doing subsistence farming in order to provide for their families, occurrence of natural disasters hinder their progress and production. Secondary to that, as a result of natural disasters, which in the main are floods and droughts, women are left with no option but to remain at home and consequently, overtly or covertly, unintended consequences such as domestic violence, intimate partner violence, and other social ills befell them. In shedding light on the vulnerabilities of women in agricultural sector, on the face-value structural level, one of the small-scale farmers stated that:

*“During floods, our crops are washed away or lose production and as a result we are unable to harvest the expected yields.”* (Participant 3, small-scale farmer, FGD)

Another participant (small scale farmer) said that:

*“Our area is prone to droughts and it is very difficult to sustain families as in addition to drought, unemployment and poverty is very rife.”*  
(Participant 7, small-scale farmer, FGD)

From the viewpoints of social workers regarding second-degree vulnerabilities of women due to natural disasters, this was echoed:

*“In spite of the fact that they provide food and take care of the children, some women are exposed to all sorts of social ills such as gender based violence, rape and sometimes get killed by their spouses.”* (Participant 15, Social Worker)

In support, Disaster Management Officer offered the following viewpoint regarding second-degree vulnerabilities of women due to natural disasters, this was asserted:

*“During evacuation process, we place community members in the same venue. In those venue [community hall] there is no enough space which might expose women to experience all form of abuse as they are in one space with men.”* (Participant 16, Disaster Management Officer)

The findings in this study substantiates the already existing literature which posits that globally women cannot perform their roles and they suffer from all sorts of social ills as a result of natural disasters. A plethora of cyclones that have been ravaging the Southern African region since 2000 bear testimony to the fact that women were disproportionately affected by natural disasters than men (Chatiza 2019). From this, the post evaluation of the impacts of Cyclone Idai which ravaged Mozambique, Zimbabwe and Malawi in March 2019 left footprints of devastating impacts on women than men. Sadly, women were subjected to multifarious challenges in the temporary rescue camps created by the humanitarian organisations. Cases of sexual harassment and domestic violence galloped, women were more traumatised from the harrowing experiences than men, their sexual and reproductive health

plummeted and poverty level increased. Furthermore, women constituted the highest number of the injured and the displaced (Chanza & Gundu-Jakarasi 2020; Nyahunda, Matlakala, & Makhubele, 2020). As for Nyahunda, Matlakala and Makhubele (2020), in the aftermath of cyclone Idai, the health of women, their psychosocial wellbeing, sanitation, sexual reproductive health, food security, bargaining power, and security were compromised in the rescue shelters created by humanitarian organisations.

In Uganda, Opondo, Abdi and Nangiro (2016) reported that during drought there was a surge of child marriage, domestic violence, and rape. What has been found to be responsible for women's vulnerability to gender-based violence during natural disasters is that during natural disasters women lose their source of income. This has been confirmed by CARE International (2014). During and after disasters, men take advantage of their social status to subject women to all forms of despicable treatment knowing that they will not be reported as they are the breadwinners during natural disasters. Some even solicit for sexual acquiescence from women/girls in exchange of food and other assets (Baten & Khan 2010). What should be underscored is that the vulnerability of women during and post disasters is attributed to the conditions that predispose them to disaster in the society such as exclusion from disaster preparedness planning processes, confinement to household responsibilities owing to ascribed gender roles, low social status and lack of bargaining power (Bradshaw, 2013). The Vulnerability Theory underpins that women have distinct vulnerabilities and this informs their differential abilities in experiencing and recovery from disasters (Bankoff, Frerks, & Hilhorst, 2013).

## **CONCLUSION AND RECOMMENDATIONS**

In this study it was established that under-development in terms of technological backlashes, economic constraints, low educational levels, poor infrastructural development, and dependence on livelihoods susceptible to natural disasters formed an interplay of factors behind the vulnerability of Runnymede village to natural disasters. Researchers concluded that people in rural areas are more prone to the impact of natural disasters due to geopolitical, structural and culture systems. On that score, it is recommended social workers, due to their educational background, should fight the injustices that people in rural areas are predisposed to and they

could challenge those injustices (inequalities) as those infringe on individual's rights to dignity and other associated rights.

Children experience the impact of natural disasters just like any other persons as they lose their valuables in the process and experience posttraumatic stress disorder as a result of natural disasters. Moreover, in the case of loss of life as a result of natural disaster, children face the new reality of living without parent(s). During such events, disaster management teams are called to provide services ranging from evacuation, relocation to safe place in collaboration with other key stakeholders like health, to provide emergency medical health services, and social welfare for food distribution. Sometimes, extended family members would come to provide protection, care, and support for the affected children. It is recommended that social workers should be actively involved in the evacuation process to ensure that the wellbeing of children is protected against social ills and place them in place of safety from disasters. Again, Women are most susceptible to natural disasters as a result of the patriarchal system which sees them belonging in the kitchen; they are unable to participate in farming to care for their children. Moreover, during natural disasters, women were forced to stay home and this predisposed them to suffer many forms of abuse from their partners. Therefore, the study recommends that women should fight for equal rights to practice farming and be funded to grow their own agricultural products with policymakers.

### **Acknowledgement**

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### **REFERENCES**

- Bankoff, G., Frerks, G., & Hilhorst, D. (Eds.). (2013). *Mapping Vulnerability: Disasters, Development and People*. Routledge.
- Baten, M. A., & Khan, N. A. (2010). Gender issue in climate change discourse: theory versus reality. *Unnayan Onneshan, Dhaka*.
- Bisht, I. S. (2013). Biodiversity conservation, sustainable agriculture and climate change: A complex interrelationship. In knowledge systems of societies for adaptation and mitigation of impacts of climate change, S. Nautiyal et al. (Eds.), *Environmental Science and Engineering*. DOI: [https://doi.org/10.1007/978-3-642-36143-2\\_8](https://doi.org/10.1007/978-3-642-36143-2_8) Springer-Verlag Berlin Heidelberg 2013

- Bradshaw, S. (2013). *Gender, development and disasters*. Edward Elgar Publishing.
- Brooks, S. & Loevinsohn, M. (2011). 'Shaping agricultural innovation systems responsive to food insecurity and climate change'. *Natural Resources Forum*, 35(3), 185–200. <https://doi.org/10.1111/j.1477-8947.2011.01396.x>
- CARE International. (2014) 'The girl has no rights': Gender-based violence in South Sudan. CARE Emergencies.
- Chanza, N., & Gundu-Jakarasi, V. (2020). Deciphering the climate change conundrum in Zimbabwe: An Exposition. In *Global Warming and Climate Change*. IntechOpen.
- Chatiza, K. (2019). Cyclone Idai in Zimbabwe: An analysis of policy implications for post-disaster institutional development to strengthen disaster risk management. Oxfam. DOI: [10.21201/2019.5273](https://doi.org/10.21201/2019.5273).
- Coates, P. (2014). Borderland, no-man's land, nature's wonderland: troubled humanity and untroubled earth. *Environment and History*, 20(4), 499-516.
- Conway, G. (2009). *The science of climate change in Africa: Impacts and adaptation*, Grantham Institute for Climate Change Discussion Paper, Retrieved 20 September 2016, from <http://www.ask-force.org/web/Global-Warming/Conway-Science-Climate-Change-Africa-2008.pdf>.
- De Vos, A.S., Strydom, H., Fouché, C.B & Delpont, C.S.L. (2011). *Research at Grass Roots: For the social sciences and human service professions*, (4<sup>th</sup> ed.). van Schaik Publishers.
- Easton, P.D. & Sommers, G.A. (2003). 'Scale and the scale effect in Market based accounting research', *Journal of Business Finance and Accounting* 30(1–2), 25–56. <https://doi.org/10.1111/1468-5957.00482>
- Enete, A. A. & Achike, A. I. (2008). 'Urban agriculture and urban food insecurity/poverty in Nigeria: The case of Ohafia Southeast Nigeria', *Outlook on Agriculture* 37(2), 131–134. <https://doi.org/10.5367/000000008784648915>.
- Fernandes, G. C. M., Boehs, A. E., Denham, S. A., Nitschke, R. G., & Martini, J. G. (2017). Rural families' interpretations of experiencing unexpected transition in the wake of a natural disaster. *Cadernos de saude publica*, 33, e00161515.
- Jagtap, S. (2007). Managing vulnerability to extreme weather and climate events: Implications for agriculture and food security in Africa. Proceedings of the International Conference on Climate Change and Economic Sustainability held at Nnamdi Azikiwe University, Enugu, Nigeria, pp 45-52.

- Kumar, R. (2011). *Research methodology: A step-by-step guide for beginners*. New Sage Publications Limited.
- La Greca, A. M., & Prinstein, M. J. (2002). Hurricanes and earthquakes. In A. M. La Greca, W. K. Silverman, E. M. Vernberg, & M. C. Roberts (Eds.), *Helping children cope with disasters and terrorism* (pp. 107–138). Washington, DC: American Psychological Association.
- Mahiya, I. & Gukurume, S. (2014). *Integrating Rights based approach in responding to effects of climate change in Chiweshe rural area: Challenges and opportunities*. Rockwood Publishers.
- Matlakala, F.K., Makhubele, J.C., & Nyahunda L. (2021). Social effects of natural disasters on small-scale farmers in rural areas. *European Journal of Economics, Law and Social Sciences*, 5 (3).
- Ndaki, P.M. (2014). 'Climate change adaptation for smallholder farmers in rural communities: The case of Mkomazi sub-catchment, Tanzania', [PhD dissertation]. Oldenburg-Carl von Ossietzky University of Oldenburg.
- Nwafor, J.C. (2007, June). 'Global climate change: The driver of multiple causes of flood intensity in Sub-Saharan Africa', [Paper presentation] International Conference on Climate Change and Economic Sustainability, Nnamdi Azikiwe University, Enugu, Nigeria.
- Nyahunda L., & Matlakala, F.K. & Makhubele, J.C. (2020). Factors impeding the participation of rural women in climate change issues in Vhembe District, Limpopo Province, South Africa: A requirement for social work intervention. *The Southern African Journal of Social Work and Social Development*, 14 (2), <https://doi.org/10.25159/2415-5829/7771>.
- Nyahunda L., Matlakala, F.K. & Makhubele, J.C. (2020) Environmental social work: Accounting for women's tragedies in the face of climate change induced disasters in Chimanimani District, Zimbabwe. *African journal of Gender, Society and Development* 9 (4): pp197-127.
- Nyahunda, L. & Tirivangasi, H.M. (2019). Challenges faced by rural people in mitigating the effects of climate change in the Mazungunye communal lands, Zimbabwe. *Jàmbá: Journal of Disaster Risk Studies*. 11(1):1-9 <https://doi.org/10.4102/jamba.v11i1.596>

- Nyahunda, L. (2020). Participation of Rural Women in Mitigating the Effects Of Climate Change in Vhembe District, Limpopo Province, South Africa Unpublished Thesis in Social Work. University of Limpopo.
- Nyahunda, L., Makhubele, J. C., Mabvurira, V., & Matlakala, F. K. (2020). Vulnerabilities and Inequalities Experienced by Women in the Climate Change Discourse in South Africa's Rural Communities: Implications for Social Work. *The British Journal of Social Work*. <https://doi.org/10.1093/bjsw/bcaa118>.
- O'Leary, Z. (2014). *The Essential Guide to Doing your Research Project*. Sage Publications.
- Opondo, M., Abdi, U., & Nangiro, P. (2016). Assessing gender in resilience programming: Uganda. *BRACED Resilience Intel*, 2(2).
- Peek, L. (2008). Children and disasters: Understanding vulnerability, developing capacities, and promoting resilience—An introduction. *Children Youth and Environments*, 18(1), 1-29.
- South African National Disaster Framework [SANDF]. (2005). Introduction: A policy framework for disaster risk management in South Africa. Cape Town: Government Printer.
- Turpie, J. & Visser, M., 2013. 'The impact of climate change on South Africa's rural areas', *Financial and Fiscal Commission* 14, 100–160.
- Zakour, M. J. (2010). Vulnerability and risk assessment: Building community resilience. In D. F. Gillespie & K. Danso (Eds.), *Disaster concepts and issues: A guide for social work education and practice* (pp. 15–60). Council on Social Work Education.
- Zakour, M., & Gillespie, D. (2013). Community disaster vulnerability: theory, research, and practice. Springer.
- Zastrow, C. (2017). *Introduction to social work and social welfare: Empowering people*. (12<sup>th</sup> ed.). Cengage Learning.



**University of Limpopo**  
Department of Research Administration and Development  
Private Bag X1106, Sovenga, 0727, South Africa  
Tel: (015) 268 3935, Fax: (015) 268 2306, Email: anastasia.ngobe@ul.ac.za

**TURFLOOP RESEARCH ETHICS COMMITTEE**  
**ETHICS CLEARANCE CERTIFICATE**

**MEETING:** 05 November 2019

**PROJECT NUMBER:** TREC/358/2019: PG

**PROJECT:**

**Title:** Nexus of social work services and disaster management services: An Afrocentric Perspective.  
**Researcher:** FK Matlakala  
**Supervisor:** Prof JC Makhubele  
**Co-Supervisor/s:** N/A  
**School:** Social Science  
**Degree:** PhD in Social Work

**PROF P MASOKO**  
**CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE**

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: REC-0310111-031

**Note:**

- i) This Ethics Clearance Certificate will be valid for one (1) year, as from the abovementioned date. Application for annual renewal (or annual review) need to be received by TREC one month before lapse of this period.
- ii) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee, together with the Application for Amendment form.
- iii) PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.



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Tel: (015) 230 9910, Email: mokobij@premier.limpopo.gov.za

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**LIMPOPO PROVINCIAL RESEARCH ETHICS  
COMMITTEE CLEARANCE CERTIFICATE**

**Meeting: July 2020**

**Project Number: LPREC/02/2020: PG**

**Subject: Nexus of Social Work Services and Disaster Management Services at Greater Tzaneen Municipality: An Afrocentric Perspective**

**Researcher: Matlakala F**

Dr Thembinkosi Mabila

Chairperson: Limpopo Provincial Research Ethics Committee

The Limpopo Provincial Research Ethics Committee (LPREC) is registered with National Health Research Council (NHREC) Registration Number **REC-111513-038**.

**Note:**

- i. This study is categorized as a Low Risk Level in accordance with risk level descriptors as enshrined in LPREC Standard Operating Procedures (SOPs)**
- ii. Should there be any amendment to the approved research proposal; the researcher(s) must re-submit the proposal to the ethics committee for review prior data collection.**
- iii. The researcher(s) must provide annual reporting to the committee as well as the relevant department.**
- iv. The ethical clearance certificate is valid for 12 months. Should the need to extend the period for data collection arise then the researcher should renew the certificate through LPREC secretariat. PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRIES.**