



**The Rise of Environmental Social Movement
Organization's Mobilization against the proposed
Hydraulic Fracturing in the Midlands, KwaZulu-Natal**

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DECLARATION

I,, declare that

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ABSTRACT

This research aims to understand social movement organizations, specifically the environmental social movement organizations and their mobilization against the proposed hydraulic fracturing in the Midlands. The proposed fracking has spurred mobilization activities among environmental social movement organizations in the Midlands. This research employs qualitative research methods. To answer the research questions and to achieve the objectives of this study, face-to-face interviews were conducted with participants from fifteen environmental social movement organizations who participated in the anti-fracking mobilization. This research draws attention to the roles of environmental social movement organizations and highlights other key findings to understanding social movement organizations, such as, the sources and challenges in getting funds for social movement mobilizations and other activities. It also captures the use of local languages as a strategy by social movement organizations. This study underscores the importance of using legal means as a strategy for social movements and the collaboration and networking among social movement organizations in advancing their goals. This study highlights how social movements recruit members for mobilizations. It captures the different positions and views held by some organizations on the issue of fracking. This study also highlights some theoretical and conceptual approaches in analyzing and understanding social movement organizations. Theoretically, this study links the concepts of environmental justice, social justice and Karl Marx's view on justice (economic justice) in his critique of capitalism, in order to understand why (factors and concerns) environmental organizations emerge and mobilize. In linking these three concepts, this study shows that environmental social movement organizations can employ the insights and richness of these concepts in their struggles towards achieving environmental justice in the society. This study highlights the economic, environmental and health impacts of hydraulic fracturing for shale gas. The findings in this research add to the broader knowledge of understanding social movement organizations in the society.

Key words: Social movement organizations, hydraulic fracturing, environmental justice

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TABLE OF CONTENTS

DECLARATION	i
ABSTRACT.....	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS.....	iv
LIST OF THE TABLES	vii
LIST OF ACRONYMS.....	viii
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background and outline of research problem	1
1.2 Research problems and objectives: Key questions to be asked	2
1.3 Key Concepts	3
1.4 Structure of dissertation:	5
CHAPTER TWO: SOCIAL MOVEMENT ORGANIZATIONS AND HYDRAULIC FRACTURING.....	6
2.1 Introduction	6
2.2 Social Movement Organizations	6
2.3 Roles of Environmental Social Movement Organization	9
2.4 Theoretical and Conceptual Approaches for Analyzing Social Movement Organizations	11
2.4.1 Resource Mobilization	11
2.4.2 Collective Behaviour	12
2.4.3 Relative Deprivation	13
2.4.4 Political opportunity.....	13
2.5 Social Movement Organizations' Strategies	15
2.5.1 Access to state decision-making	15
2.5.2 Street Protests.....	15
2.5.3 Networking	16
2.5.4 Social Media Communication.....	17
2.5.5 Litigation Strategy	17
2.5.6 Public Education	17
2.5.7 Recruitment Strategies	18

2.6	Sources of Funds for Social Movement Organizations.....	19
2.7	Hydraulic Fracturing or Fracking and its Impacts	22
2.7.1	Economic Impacts.....	24
2.7.2	Environmental and Health Impacts.....	25
2.8	Environmental Social Movement Organizations in South Africa.....	27
2.9	Environmental Justice Struggles in South Africa	29
2.10	Conclusion.....	32
CHAPTER THREE: ENVIRONMENTAL JUSTICE, KARL MARX’S VIEW ON JUSTICE AND SOCIAL JUSTICE		34
3.1	Introduction	34
3.2	Karl Marx’s View on Justice.....	34
3.3	Social Justice	41
3.4	Environmental Justice	43
3.5	Relationships between the three forms of Justices.....	45
3.6	Conclusion.....	48
CHAPTER FOUR: METHODOLOGY		49
4.1	Introduction	49
4.2	Qualitative Research and Interpretivism	49
4.3	Sampling Design	50
4.3.1	Sample Selection and Size	50
4.4	Interview and data collection procedures.....	51
4.5	Ethics.....	52
4.6	Difficulties in Data Collection	53
4.7	Conclusion.....	54
CHAPTER FIVE: DATA ANALYSIS AND FINDINGS		55
5.1	Introduction	55
5.2	Year of Participation in Fracking Issues	55
5.3	Factors and Concerns that Motivated the Emergence of Environmental Social Movement’s Mobilization.....	56
5.4	Recruitment of members into Environmental Organizations.....	61
5.5	Strategies Employed by the Environmental Social Movements	65
5.6	Collaboration with other Environmental Social Movements Organizations	70
5.6.1	Opportunities and challenges of working with other organizations	72

5.7	Sources of funds and challenges in getting funds	74
5.8	Positions and Viewson Fracking	79
5.9	Conclusion.....	81
CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS.....		82
6.1	Introduction	82
6.2	Key Findings	82
6.3	Recommendations for Further Research.....	86
6.4	Limitations of the Study.....	87
REFERENCES		89
APPENDICES I: INTERVIEW SCHEDULE		119
APPENDICES II: ETHICAL CLEARANCE LETTER.....		122
APPENDICES III: INFORMED CONSENT LETTER		123
APPENDICES IV: CODES DEVELOPMENT IN THE STUDY		126
APPENDICES V: GATE KEEPERS LETTERS.....		128

LIST OF THE TABLES

- Table 1: Environmental Organizations and year of Fracking Campaign
- Table 2: Factors and Concerns that motivated the emergence of Environmental social movement's mobilizations
- Table 3: Recruitment of members into Environmental Social Movement Organizations
- Table 4: Strategies employed by the Environmental Social Movements
- Table 5: Sources of Funds and Challenges in getting funds

LIST OF ACRONYMS

ACT	African Conservation Trust
AEC.....	Anti-Eviction Campaign
AIDC.....	Alternative Information and Development Centre
APF.....	Anti-Privatization Forum
CBO.....	Community Based Organization
CCF.....	Concerned Citizen's Forum
COSATU.....	Congress of South African Trade Union
CPSA.....	Concerned Young People of South Africa
CSBIG.....	Coalition of South Africans for Basic Income Grant
CWIU.....	Chemical Workers Industrial Union
DME.....	Department of Minerals and Energy
DUCT.....	Duzi Umgeni Conservation Trust
EJNF.....	Environmental Justice Network Forum
ELA.....	Earth-Life Africa
EMG.....	Environmental Monitoring Group
ERP.....	Education Rights Project
EWT.....	Endangered Wildlife Trust
GLEP.....	Gay and Lesbian Equality Project
GI.....	Greenpeace International

GW.....Groundwork
 HEJN.....Highveld Environmental Justice Network
 HPA.....Homeless People’s Alliance
 LPM.....Landless People’s Movement
 MPRDA.....Minerals and Petroleum Resources Development Act
 NEMA.....National Environmental Management Act
 NFA.....Native Farmers Association
 NIF.....New Israel Fund
 NLC.....National Land Committee
 PASA.....Petroleum Agency South Africa
 SAWC.....South African Water Caucus
 SDCEA.....South Durban Community Environmental Alliance
 SECC.....Soweto Electricity Crisis Committee
 SEWA.....Self-Employed Women’s Association
 SEWU.....Self-Empowered Women’s Union
 TAC.....Treatment Action Campaign
 TGPA.....Transvaal Game Protection Association
 WESSA.....Wildlife and Environmental Society of Southern Africa
 WDGPA.....Western Districts Game Protection Association
 WWF.....World Wide Fund

CHAPTER ONE: INTRODUCTION

1.1 Background and outline of research problem

The emergence of social movement organizations in the society is important because of the roles they play. Social movement organizations articulate new policies and create public awareness and give room for citizens to engage and experience meaningful democracy (McKinley 2006:424). The emergence of environmental social movement organizations is very important in their defense and sought for control of the environment and its resources (Escobar 1998:61). This study seeks to explore and understand the rise of environmental social movement organizations and their mobilization against the proposed hydraulic fracturing in the Midlands, KwaZulu-Natal. Rhino Oil and Gas has put forward a proposal to undertake explorations for fracking in the Midlands region (Midlands Conservancies Forum 2016). Hydraulic fracturing or fracking is a form of mineral exploration for shale gas which involves “a high pressure deep drilling technique in order to break the shale underground rock structure using a mixture of water, sand and an elaborate mix of toxic chemicals creating wells to release and access the natural gas or oil trapped in rock formation” (Sishutu 2015:554). Shale gas is methane and a natural energy trapped in rock formation deep underground. They are sources of hydrocarbons used to generate energy (Boyer et al. 2011:28-29). Although the process of hydraulic fracturing has not as yet been carried out in South Africa, the oil company mentioned here has only made a proposal to explore the possibilities of fracking in the Midlands KwaZulu-Natal.

Hydraulic fracturing has environmental, health and socio-economic impacts on the environment and the people (Mair 2012; Vermeulen 2012). One major effect of fracking is the contamination of underground water. Such implications of fracking have stirred environmental social movement organizations, local communities and human rights organizations to mobilize against the proposed fracking in the Midlands. Thus, this research is a study of the activities, strategies and mobilizations by environmental social movement organizations or environmental organizations against the proposed hydraulic fracturing.

This research explores the factors that contributed to the rise and mobilization of environmental organizations, against the proposed hydraulic fracturing in the Midlands, KwaZulu-Natal. Another reason why this research is carried out is that much research has

been undertaken by Boschi (1987); Saunders (2007) and Lee et al. (2015) on the activities, characteristics and strategies of social movement organizations; however, not much has been written on the factors and concerns for rise of environmental social movement organization's mobilization against hydraulic fracturing, especially in the Midlands of KwaZulu-Natal. The gap this research will fill is to explore how environmental social movement organizations in this research recruit its members and the strategies employed to achieve their goals against the proposed fracking, specifically in the Midlands. This research will also explore and describe how these environmental organizations in the Midlands, KwaZulu-Natal get their funds, the challenges faced in securing funds in their mobilization and how they collaborate with other organizations in their mobilization against the proposed fracking in the Midlands.

1.2 Research problems and objectives: Key questions to be asked

This research seeks to explore the factors that give the rise to environmental social movement organization's mobilization against the proposed hydraulic fracturing in the Midlands KwaZulu-Natal. Hence, the following are the research questions that this study seeks to answer:

1. What factors and concerns gave rise to environmental social movement organization's mobilization against the proposed hydraulic fracturing in Midlands KwaZulu-Natal?
2. How do environmental social movement organizations recruit and mobilize its members against the proposed hydraulic fracturing in Midlands KwaZulu-Natal?
3. What are the strategies employed by environmental social movement organizations in achieving their goals in the mobilization against fracking in the Midlands?
4. How do environmental social movement organizations get funds for mobilization against the proposed fracking?
5. What are the roles of environmental social movement organizations?

The broad objectives that this research seeks to explore are:

1. To understand the factors and concerns that gave rise to environmental organization's mobilisation against the proposed hydraulic fracturing.
2. To explore how environmental social movement organizations recruit and mobilise its members against the proposed hydraulic fracturing.
3. To highlight and understand the strategies employed by environmental social movement organizations in achieving their goals in the mobilisation against fracking in the Midlands.
4. To explore the sources of funds for environmental social movement organizations in their mobilisation against the proposed hydraulic fracturing.
5. To highlight the roles of environmental social movement organizations.

1.3 Key Concepts

There are many theories and concepts used in understanding the emergence of social movement organizations. Macionis and Plummer (2008:455) highlighted that relative deprivation, mass-society, structural-strain, resource mobilization and new social movement theories are some factors that lead to the emergence of social movements (Giddens 2009). These theories and concepts could be applied in the analysis of some social movement organizations. For example, relative deprivation is employed to analyze movements that emerged as a result of being deprived of something, and structural-strain theory captures movements that emerged out of shared concerns about the inability of the society to operate (Macionis and Plummer 2008:455; Runciman 1966). This research will employ the concept of environmental justice and social justice linked together with Karl Marx's views on justice in order to understand the rise of environmental organizations and their mobilization against the proposed hydraulic fracturing in the Midlands KwaZulu-Natal.

Environmental justice posits that everyone, even the most susceptible has a right to protection from invasion of his/her environment from harm (Roberts and Toffolon-Weiss 2001:10; Hofrichter 1993:4; Gerrard and Foster 2008). The principles of environmental justice convey the idea of social transformation that is geared towards satisfying human needs and enhancing the quality of life. Environmental justice speaks of social transformation and emancipation which links to Karl Marx's theory of class as seen in his condemnation of

capitalist exploitations. Marx's condemnation of capitalism portrays economic justice. To understand Marx's view of justice, we must understand its origin which emanates from his theory of class. Marx explains two types of class- the bourgeois (the rich/capitalist class) and the proletariat (the poor or working class). The proletariats are exploited by the bourgeois. Hence, Marx condemns the capitalist exploitation of the proletariat and calls for emancipation and economic justice (Gueguen 1986:281; Chellan 2016:3). The concept of justice in Marx's condemnation of capitalism implies that Marx's justice for the proletariat is linked to the broader view of justice, which is also articulated in environmental and social justice as expressed in this research. Marx's idea of justice signifies economic equality or justice- which gives right to every individual in the society to receive the same amount of resources regardless of occupation, skills and work (Van de Veer 1973; Sellards 2010).

Environmental justice and Marx's view of justice are both tacitly aligned to principles of social justice. Agyeman (1978:235) explained that due to inequalities in the distribution of environmental goods and bads which affects mostly the poor and marginalized, it is impossible to sideline environmental issues from social justice. This is because environmental issues always lead to the emergence of human rights and environmental organizations which holds a joint concern for environmental and social justice. The principles of social justice are and must be included in issues of the environment and green campaigns. This is because the principles of social justice in environmental issues also give right to everyone to claim for their social rights in using the environment. The principles of social justice on environmental issues emphasize the rights to: (a) accurate information about situations (b) a prompt, respectful and unbiased hearing when contamination claims are made (c) democratic participation in deciding the future of the contaminated community (d) compensation from parties who have inflicted injuries on victims (e) elimination of environmental racism (Capek 1993:8). Thus, the linking of these three concepts of justices (environmental, Marx's justice and social justice) as a framework that informs this study, is suitable because the three concepts of justices emphasizes justice for poor and marginalized in environmental issues. These three concepts of justices are suitable to this research because they show how these environmental organizations are being motivated to end the structural, social, environmental and economic inequalities/injustices that fracking will cause on the environment and among the people in the Midlands (Regan 2012).

1.4 Structure of dissertation:

This research is divided into six chapters:

The first chapter is the introductory chapter which provides the necessary background information and research problem of the study, key questions to be asked, broader issues to be investigated in the research, key concepts and the structure of the dissertation.

The second chapter will focus on conceptualizing social movement organizations by highlighting the factors and concerns that necessitate social movement emergence. It will also capture the strategies, sources of funds, recruitment of members and the roles of environmental social movement organizations. It will review literatures on the process of hydraulic fracturing. It will also look at the importance of fracking to the economy and its environmental and health impacts.

The third chapter explores more details on the key concepts, which are the concepts of environmental justice, Karl Marx's views on justice and social justice.

The fourth chapter will explain the methods and methodology involved in the study. It will also provide details on the interviews, sample designs and data collection and analysis procedures.

The fifth chapter will focus on presenting the data from the interviews which will be analyzed and presented in tables. This chapter will also cover discussion of findings which will be linked to the literatures and theory used in this research.

The sixth chapter will look at the general conclusion, key finds, limitations as well as the recommendations for further research.

CHAPTER TWO: SOCIAL MOVEMENT ORGANIZATIONS AND HYDRAULIC FRACTURING

2.1 Introduction

In contemporary society, activities of social movement organizations are dominant in the media. The issues raised by these organizations are hotly contested problems in our society such as animal rights, abortion, civil rights, human rights, democratization, euthanasia, environmental degradation, family values, gay and lesbian rights, gender issues, inequality, government intrusion, religious freedom, poverty and many others (Snow, Soule and Kriesi 2004:3). These issues show that most developing countries witness the emergence of various social movement organizations in the society seeking solutions to issues affecting them (Byrne 1997:1). These movements are usually initiated by a few people who share the same views about the way society should be structured or restructured to the advantage of the people and for the development of the society (Eder 1993:3; Buechler 2000:4).

This chapter briefly explains the difference between social movement and social movement organizations. It will identify some theoretical and conceptual approaches in analyzing and understanding the emergence of social movement organizations. This chapter will focus on the strategies employed by social movement organization, sources of funds, roles of environmental social movement organizations and recruitment strategies for social movement organizations. This chapter will also focus on explaining the process of hydraulic fracturing for shale gas exploration and identify the economic, environmental and health impacts of hydraulic fracturing for shale gas in the society. The impacts of fracking are not yet evident in South Africa because fracking has not been done in South Africa. The impacts presented in this research are impacts deduced from fracking in other places to show how fracking will impact on South African environment and people if and when fracking will be approved. This chapter also presents the environmental organizations in South Africa and their struggles for environmental justice in South Africa.

2.2 Social Movement Organizations

Zald and Garner (1966) introduced the term “social movement organization” to refer to various independent organizations that come together as collectives in different activities.

The term social movement has been used by analysts and theorists to describe various uprising movements and protests over issues that affect people in the society (Wilson 1973:5-8; Cohen and Rai 2000:3). Tilly (2004:5) acknowledged that the German sociologist Lorenz Von Stein introduced the term social movements into academic and scholarly debates. Tilly (2004:5) asserted that social movement is a unitary process of the people towards self-awareness and control. This implies that social movements originated from the idea of unity by people to attain empowerment and change. Social movements can be seen as the collective actions of the poor and marginalized masses expressing their “grievances and concerns about the rights, welfare and well-being of themselves and others, by engaging in various types of collective actions, such as protesting in the streets, dramatizing those grievances and concerns and thus demand that something be done about them” (Snow, Soule and Kriesi 2004:3). These explanations of social movement emphasize the collective unity of social movements. Byrne (1997: 10-11) highlighted some major features of social movements. He asserted that social movements are unpredictable, irrational, unreasonable and disorganized. Godwin and Jasper (2009:4) defined social movements as “a collective, organized, sustained and non-institutional challenge to authorities, power-holders or cultural beliefs and practices”. Godwin and Jasper differ from other authors by acknowledging the “non-institutional” nature of social movements. This is very important in the conceptualization of social movements as it specifically states the undiluted nature (non-institutional) of social movements.

The term social movement is mostly misused and confused with social movement organizations. However, Princen and Finger (1994), Davis et al. (2008) and Diani (1992) noted that social movements are equivalent to social movement organizations because of their shared goals and values and how they network. Piven and Cloward (1977) also added that social movements grow to become formal organizations over time as they grow above their individual interests. Zald and Garner (1966) elaborated on this point by stating that “while collective acts of protest might begin in informally organized ways without proper structures and processes, over time social movements develop into formal organizations or social movement organizations”. In essence, there is a thin line between the concept of social movements and social movement organizations. This is because both concepts explain the ways, means, and why people come together in order to express their common concerns collectively. To further clarify the confusion between the term social movements and social movement organization, Stewart and Zaaiman (2015:227) explained that social movements

are informal movements that emerged to express common problems and interests in the society. They noted that social movements often do not have a leader, constitutions and manifesto. Thus, they get stronger and more institutionalized as they grow to become organizations. This shows that social movements emerge randomly within the society without structure or organization; while social movement organizations are formal and organized with structures and constitution (McCarthy and Zald 1977:1218).

Zald and Ash (1966:327) highlighted key points between social movements and social movement organizations. They noted that members and participants in social movement organizations have the responsibility of preserving the organization and its goals. Essential features of social movement organizations noted by Zald and Ash are that social movement organizations maintain goal transformation with diffuse goal targets, they uphold organizational maintenance of maintaining its members, funds and other key elements that keeps the organization going. Social movement organizations also have a sense of hierarchy of offices and power in the organization. They further noted that social movement organizations have membership requirements and the ability to change the individual and society (Zald and Ash 1966:333). Another distinction in Zald and Ash (1966:334) conception of social movements and social movement organizations is that through their campaigns and influence, social movement organizations gain positions and power in the society. Zald and Ash (1966:335) argued that social movement organizations may fail when they receive support from extremist groups. This may cause members to leave the organization; thus, this is a result of legitimacy. This is because some members do not want to be associated with extremists. Zald and Ash (1966) also argued that for social movement organizations to succeed or fail, it depends on their interaction and coordination with other organizations. This point on interaction with other organizations explains networking among social movement organizations which is discussed later in this chapter.

From the explanations of social movement and social movement organization above, the differences are based on the nature of these two concepts. The nature of social movement is non-institutionalized or unstructured; while the nature of social movement organization is institutional, structured and organized with constitution (Rawcliffe 1998; Rootes 2000; Saunders 2007:228). The difference is seen in their various mode of operation; for example, social movement protest against societal issues randomly, sometimes without proper examination and documentation; while social movement organization will follow due

processes in examining and addressing issues in the society (McCarthy and Zald 1977; Diani and Donati 1999). These explanations show the differences and similarities between social movement and social movement organization. This is because the roles of social movements and the roles of social movement organization are not far apart.

2.3 Roles of Environmental Social Movement Organization

The works of environmental social movement organizations are very evident in our societies and communities. They have employed various measures and methods to upgrade and sustain our degrading environment; thus, also reducing greenhouse gas emission and global warming. This section will highlight some of the roles of environmental social movement organizations in order to answer the research question of what are the roles of environmental social movement organizations.

Environmental social movement organizations use legal systems to seek for justice for the environment and the marginalized people affected by environmental issues (Fritsvold 2009:800). The legal role of environmental movements is vital to the discourse of environmental activism (Ballard, Habib and Valodia 2006:398; Franco, Martinez and Feodorff 2013; Hedden, Moyer and Rettig 2013:1-9). Environmental social movement organizations also play the role of a negotiator by negotiating with the state via institutional and legal means (Foweraker 1995:78).

Environmental social movement organizations also give voice to voiceless communities and individuals that are affected by environmental issues to participate in the decision-making process concerning the environment. They mobilize the public and local communities to express their concerns against capitalist activities that destroy the environment (Rodrigues 2004:16-20; Temper et al., 2013). This is a core role played by environmental social movement organizations. In giving voice to the voiceless, environmental social movement organization also help to liberate the masses from the power dominance of politics and capitalism and defend the people against technocratic states and politics (Touraine 1985:765). This is very vivid in the report presented by Groundwork environmental organization in South Africa. In 2005, Groundwork presented a report on the “greenwash” attitude of oil companies operating in local areas with the mind set of “benefit for mankind”-“a situation whereby oil companies and industries claim to be working for the betterment of the people, yet they are exploiting and causing more harm to the people”(Hallowes and Butler 2005:103).

In doing this, Groundwork as an environmental organization, have exposed the underlying aim of oil companies and thus, creating awareness and liberating the masses from the underlying plans of the oil companies.

Environmental social movement organizations seek to educate the public on environmental issues, measures and ways of interacting with the environment. They are very efficient in educating and creating awareness on environmental issues and knowledge to the least persons in the society (Brecher 2015:17). As the need for care of the environment continues to increase, environmental activists and environmental organizations also push for the inclusion of environmental studies in formal educational system in order to spread knowledge of environmental issues in the society (Everett 2001:89). This inclusion of environmental studies in formal educational systems will build students to become future opinion makers on environmental issues and to also contribute new knowledge and methods in tackling environmental issues. The educational sectors of environmental organization also “train manpower for the skills needed in environmental engineering” (Everett 2001:87); this is important because these skills will help maintain the environment for the future. Some environmental organizations focus on environmental education as its primary aim. They also go to High Schools to educate the students on the need and importance of a friendly environment.

Apart from the educational support that environmental social movement organizations offers to the public, they also fill the oversight gaps of the government by allocating aid to people and communities where government aids are not available (Hansmann 1980:836-845; Dreher et al. 2014:1449). They are also inclined towards effective and material concerns that cut across areas in the society neglected by government agencies (Ballard, Habib and Valodia 2006:398; Mainwaring and Viola 1984:20; Robins 2008:3).

Environmental social movement organizations also influence policy making in the society. In their influence on policy making, they either reject or support a policy that is to be implemented (Boschi 1987). If the policy includes strategies that support environmental sustenance, it is supported; the reverse is the case if the policy does not support environmental sustenance (Johnson, Agnone and McCarthy 2010:2271). They also call on governments to implement laws to regulate actions that will cause harm to the environment (Sutherland 2013; Bond 2015). This aspect of the roles of environmental social movement

organizations is identified in the mobilizations and protests by some organizations examined in this research against the implementation of fracking in South Africa and in the Midlands KwaZulu-Natal.

From these roles, it is satisfactory to posit that environmental social movement organizations mobilize for altruistic motive which is geared not only towards humans but towards all living things in the environment (Zirakzadeh 1997; Silk 2004:239).

2.4 Theoretical and Conceptual Approaches for Analyzing Social Movement Organizations

There are many concepts that are employed in analyzing and understanding the emergence of social movement organizations in the society. The core question is, why do movements form? (Jenkins 1983:530). In answering this question, we have to identify and analyze what factors and events spur social movement organization's emergence and mobilization. For the purpose of this research, the concepts used for analyzing social movement organizations that will be discussed in this section are resource mobilization, collective behaviour, relative deprivation and political opportunity (McCarthy and Zald 1977; Smelser 1963; Tarrow 1998; Mayer 2004; Goodwin and Jasper 2003; Olson 1965).

2.4.1 Resource Mobilization

McCarthy and Zald (1973, 1977) demonstrated that resource mobilization is one of the dominant concepts that lead to social movement organizations' emergence and mobilization. In analyzing their emergence, resource mobilization examines the capacity of the organization to generate funds to foster mobilization and continuity (Cress and Snow 1996:1089). Death (2014) also added that the concept of resource mobilization in explaining social movement organizations also entails having resourceful and supportive individuals that are willing to provide resources for the organization. In essence, resource mobilization in organization's emergence focuses on the availability of resources such as money, moral, labour, knowledge and information for the organization (Sen and Avci 2016: 126; Oberschall 1973; Fireman and Gamson 1977:2). However, there have been many criticisms of resource mobilization perspective of understanding organization's emergence. Resource mobilization is criticized because the lists of resources are long without it specifying which resources are more important for organization's emergence and survival. Thus, the focus of resource

mobilization has been to include whatever variables that organization deems fit for mobilization (McAdam, McCarthy and Zald 1988; McCarthy and Zald 1977:1213; Oberschall 1973). It is also criticized because it does not state why and how organizations emerged but rather focuses on the material means of survival and mobilization (Cress and Snow 1996:1091). McCarthy and Zald (1977:1222) and Smelser (1963) also noted that the avenues for acquiring resources might be limited due to the activities of authorities and securities to frustrate organization's emergence and mobilization; other structural factors such as communication and political freedom also limit the idea of resource mobilization in understanding social movement organizations. Another limitation of resource mobilization is that organizations compete with each other for resources; hence, resource might be limited for organizations to emerge and survive. Stinchcombe (1965:148) added that older organizations may survive than new organizations because they have the professional techniques and experience in fund raising and existing relationships with benefactors that will likely give their resources to a known and older organizations than new organizations.

2.4.2 Collective Behaviour

Some authors have identified and explained collective behaviour as another theory that helps in understanding social movement organization's emergence. Robert E. Park was the founder of the theory of collective behaviour in the field of Sociology. Park was concerned with collective behaviour because of its positive and healthy elements in social life (Rule 1988:97). Snow and Oliver (1995:571) defined collective behaviour as the "extra-institutional, group-problem solving behaviour that encompasses an array of collective actions, ranging from protest demonstrations, to behaviour in disasters, to mass or diffuse phenomena, such as fads and crazes, to social movements and even revolution". This means that collective behaviour is non-institutional and a formless means of groups or individuals trying to solve problems in the society. Blumer (1951), Turner and Killian (1987) argue that collective behaviours are spontaneous and unregulated activities of a group. They further added that collective behaviour is caused by the breakdown or strain in formal routines of everyday life (Blumer 1951; Johnston and Lio 1998:457). The link between collective behaviour and social movement organization is mobilization. In social movement organization, mobilization is a form or kind of collective behaviour whereby individuals come together and organize themselves to mobilize for the pursuit of a shared objective (Melucci 1996:289). Hence, collective behaviour could be seen as one of the theories for

analyzing the mobilization in social movement organizations. However, one of the major criticisms of collective behaviour in understanding social movement organization is that it allows the pursuit of individual benefits and gives room for free riders (Olson 1965). This implies that an individual, within the group, can decide to behave or act contrary to the organization's plans; thus, jeopardizing the goals of the organization.

2.4.3 Relative Deprivation

Relative deprivation can also be seen as one of the conceptual approaches to the understanding of social movement organization's emergence. Runciman (1966:9) explained that the idea in the theory of relative deprivation is the fact that "people's attitudes, aspirations and grievances largely depend on the frame of reference within which they are conceived". This implies that people's desires are evaluated in reference to others for fair treatment; when the situation is unfair, it leads to emergence of social movement organizations (Davies 1962:7; Gurney and Tierney 1982:33). McCarthy and Zald (1977:1213) argued that relative deprivation is also criticized because of its lack of objectivity. This is because the theory seems to flow from subjective deprivations whereby when some individuals or group of people think or feel they are deprived of one thing or the other, they begin to mobilize and eventually form an organization (Guimond 1983:526). Sen and Avci (2016:126) also added that relative deprivation is not sufficient because it does not explain other factors that acted in the deprivation that gave rise to social movement organizations. Another objection to relative deprivation is that it fails to explain the "processes by which persons and institutions from outside the collectivity under consideration become involved" (McCarthy and Zald 1977:1215). This implies that the theory fails to explain why people outside of the perceived deprivation area get involved in the organization.

2.4.4 Political opportunity

Political opportunity or process is one of the perspectives used in understanding the emergence and activities of social movement organizations. Eisingner (1973) was the first to use the concept of political opportunity to explain that the openness of government to receive inputs from the society necessitated the emergence of riots in American cities in 1960s. This also follows that cities with repressive government foreclose emergence of protests. Tilly (1978) agrees with Eisingner but extends his explanation to imply that political opportunity

only gives room for social movement organizations to advance their claims and strategies at a particular time. Thus, for Tilly, political opportunity changes and when it changes, social movement's strategies and goals change as well.

Mayer (2004:126) explains that political opportunity perspective of understanding social movement organizations implies that social movement organization's emergence, mobilization and survival depends on the context of the political setting. This means that the world outside social movement organizations enhance or inhibit social movement organization's advocacy and mobilization for a particular goal. It enhances or inhibits their alliances, it also influences them to employ particular strategies rather than others and it determines their effect on the politics and policies of the society. Tarrow (1998) added that political opportunity helps social movement organizations to contextualize their claims and strategies. He further highlighted that activists under political opportunity are rational thinkers waiting for signals from the state in order to strategically organize their claims and strategies. Another element in political opportunity is that openness to activism necessitates openness to policy reform. This is because when social movement organizations emerge out of political openness, their mobilization influences and changes some of the political policies (Costain 1992).

However, Gamson and Meyer (1996:275) noted that political opportunity focus more on the society and it explains basically how social movement organizations carry out their activities and mobilization without explaining why they emerge, mobilize and employ certain strategies (Goodwin and Jasper 2003). Andrews (2002), Fetner (2001) and Rohlinger (2002) also argue that political opportunity only highlights variables such as, state openness or repressiveness, that political opportunity offers social movement organizations. Hence, this also makes the concept of political opportunity robust and too broad that it does not categorically specify the important variables. Political opportunity is also limited because it focuses too much on political circumstances; thus, neglecting other factors such as cultural factors in the emergence of social movement organizations (Sen and Avci 2016:126). Another limitation of political opportunity is that when a new repressive political government comes into power, what happens to social movement organizations that emerged and strategized actively under the previous open political government? From the readings on political opportunity, this is the question that comes to mind of which it is not yet answered. However, political opportunity gives more explanation in understanding social movement organizations. The

explanations of political opportunity can be deduced to explain perfectly how the environmental organizations examined in this research emerged in a liberal and open government like South Africa.

2.5 Social Movement Organizations' Strategies

Social movement organizations push the demand of the masses on the state and to negotiate with state authorities to meet the people's demand (Boschi 1987). Thus, for social movements to achieve their goals and to effectively perform their roles in the society there are some strategies they will employ to effect social change. Lee et al. (2015:13) listed five important features of a well-organized strategy. They pointed out that a well-organized strategy must (a) articulate a vision of a transformed society; (b) it should encompass social, political and economic issues in the society; (c) it should evaluate the balance of power between state and other organizations, and interest groups; (d) it should specify the goals to be achieved in the strategy; and finally, (e) it should focus on a particular issue in the society (Lee et al. 2015:6). Some of the strategies of social movement organizations will be discussed in the following sub-headings.

2.5.1 Access to state decision-making

Barton and Roman (2012:869) argued that one of the strategies of social movement organizations is to get access to decision-making processes to issues such as local development issues, labour and environmental issues. The access to decision making channels influences the outcomes of decisions on societal issues by state governments and institutions (Swyngedouw 2004:30). Lee et al (2015:7) added that the push for inclusion into decision-making is also to participate in democratic arenas and to foster revolutionary protagonist against the government and institutions with strain policies. The access to decision making by social movement organizations, explains the need for inclusiveness and public participation in the implementations of policies in the society.

2.5.2 Street Protests

Barton and Roman (2012:870) highlighted street protest as a strategy of social movement organizations. Street protest is employed to also draw the attention of the government to the issues affecting the society. Street protest is one of the common strategies of social

movement organizations. Protest strategy can take the form of demonstrations and dramatization of the issues affecting the people. Sometimes this strategy turns out to be unstructured and violent; thus, hindering the goal of the organization.

2.5.3 Networking

This is another strategy employed by social movement organizations in advancing their goals. This strategy speaks about the collaboration among social movement organizations advancing for a similar goal in the society. Saunders (2007:229-237) argued that social movement organizations are networks that interact between individuals and other social movement organizations with similar identity. This implies that networking is a form of collaboration or interaction with other organizations with shared identity; in doing this, these organizations also interact and connect individuals in the society to these collective organizations (Diani 1992:8). Networking among social movement organizations shows the pattern of relationship ties among organizations with shared identities or with the same mission. Networking among social movement organizations also explains how organizations share information, experts, and materials, and co-attend public campaigns organized by any of the organizations. In a simple term, networking is all about finding and connecting with other organizations with similar mission as partners or alliance (Diani 2002:3-14). An example of networking is the “Chilean Wood Corporation, created in 1952 represented over 200 movements in Chile, was the vehicle through which their interests were expressed in the public decision-making” (Basu 2010:99; Barton and Roman 2012:873). Lee et al. (2015) also identified the creation of international solidarity with other organizations around the world. This strategy is employed to “link local struggles to the efforts of other activists struggling on different terrains towards common objectives” (Lee et al. 2015:9). This strategy is dominant among environmental social movement organizations in South Africa; for example, Groundwork, Earthlife Africa and the South Durban Community Environmental Alliance came together to form collaboration and networking in achieving environmental justice in South Durban. Some of these alliances are explained in the next chapter, the sections that explain environmental organizations and their struggles for environmental justice in South Africa. However, Saunders (2007:236) pointed out that, despite the networking ties among social movement organizations and their pattern of sharing information and materials, some information from other organizations may not be seen as important and the information maybe stockpiled;

while the activities of the organization will be prioritized (Saunders 2007:236-238). This point shows one of the limitations of networking.

2.5.4 Social Media Communication

Cabalin (2014:25-29) identified modern means of communication as one of the strategies used by social movement organizations. He noted that organizations' mobilization is aided by using Facebook. This strategy buttresses the use of modern means of communication technologies as strategies for organizations' mobilization (Castells 2012). This strategy also shows how social movement organizations use the internet as an effective and innovative strategy to mobilize supporters and to disseminate information in advancing their goals (Silk 2004:239).

2.5.5 Litigation Strategy

Litigation is one of the strategies used by social movement organizations in their struggle for societal change. Social movement organizations employ this strategy to achieve their aims through legal means (Barkan 1980). This strategy explains how organizations try to get credible and experienced lawyers in court to make convincing and logical arguments to convince judges on issues advocated for. This strategy provides rights to social movement organizations so as to effect social change in all aspects of the society. However, social movement organizations often encounter challenges using this strategy in obtaining favourable court rulings. This is because most cases demand political change in the society; thus, some lawyers are not willing to defend the organization and some judges take time to deliver judgments. For example, in the 1940s some communist organization leaders facing persecutions had difficulties in getting legal counsel. This is because some lawyers were not ready to disagree with the state (government) and some judges were slow to offer judgments (Barkan 1980:946).

2.5.6 Public Education

In McCarthy and Wolfson's (1996) analysis of social movement organizations, public education is one of the strategies used by social movement organizations to advance their goals. This is a means of creating public awareness on issues affecting the society. For example, some organizations train teachers to teach in schools; while other organizations educate the public by sharing educative pamphlets to people on the streets. This is one of the

common strategies used by social movement organizations as they sometimes educate the public on social media and websites.

2.5.7 Recruitment Strategies

Membership is also a vital aspect of understanding social movement organizations. Organizations need members in order to carry out their projects and mobilizations. There are various strategies of recruiting members into an organization. Prior contact to potential members is one of the means of recruiting members into organizations. The potential participants must have had a pre-existing and interpersonal tie with an existing member who will have to introduce and inform them about the organization (Snow, Zurcher and Olson 1980). Another means of recruiting members is that some of the potential members are predisposed socio-spatially to participate in an organization. This social-psychological predisposition comes from socio-spatial settings such as the malls, airports, bus stations, drinking parlours and country clubs. This means that information about the organization is communicated or displayed in those areas; either verbally or non-verbally (Snow, Zurcher and Olson 1980:789-790).

In another vein, Rochford (1982:399) argues that social psychological issues make people join movements. He explained that social-psychological issues such as personal troubles, tensions, alienation, and deprivation influence people to join organizations in search of meaning and to alleviate their situations (Seeman 1959:785; Judah 1974; Davies 1971). In addition, Polletta and Jasper (2001:284-289) argued that shared collective identity is one of the means of recruiting new members into social movement organizations. In this sense, the new members join the organization because doing so accords with who they are and their beliefs. This is also because the organization reflects what they believe and what they are comfortable with (Corte and Edwards 2008:6-15). A deeper dimension of how socio-psychology will aid the recruitment of new members to organizations is that, those who perceive the threat of being affected by a particular issue (such as environmental degradation) will most likely join an organization that expresses concerns about the environment in order to prevent the occurrence of environmental issues in their environment.

Snow, Zurcher and Olson (1980) and Jasper and Young (2008) respectively noted that social movement organizations can use social network to help spread the ideologies and activities of the organization; thus, recruiting new members (Oberschall 1973). For example, movements

can create a social network such as Facebook, and allow people who are interested to sign up their membership to the organization (Wilson and Orum 1976:189-195). Snow, Zurcher and Olson (1980) also acknowledged that social movement organizations can recruit members in public space by face to face contact and they can recruit through institutionalized mass communication such as the radio and TV as well as door-to-door canvassing. However, the use of radio and TV to recruit potential members to organizations might be very expensive for some organizations that are not financially strong.

Olson (1965) and Weinstein (2005:598-624) noted that some social movement organizations recruit new members by giving out incentives and rewards. In as much as this could stand as a means of recruiting new members, it is also faulty on the fact that there might be no consistency in giving of incentives and rewards to new members; hence, the giving of incentives might hinder the recruitment processes of an organization and it might also lead to old members leaving the organization since there is no consistency in the giving of incentives. These will in-turn lead to the death of such organizations.

Klandermans and Oegema (1987:519-531) posited that some social movement organizations recruit members by removing some criteria and barriers such as work, health and school (educational qualification) that hinder people from participating in the movement. The removal of these criteria might be both positive and negative. On the positive side, it will give room for more people to join the organization. But on the negative side, it will hinder the quality of ideas and human resources in the organization. This is because some members who are not educated might not be able to give a coherent and logical explanation to support the purpose and goals of the organization.

2.6 Sources of Funds for Social Movement Organizations

Financial support is very important in the mobilizations and activities of social movement organizations. It is also necessary for the existence and survival of organizations. Funds also help in the facilitation of some of the strategies and roles employed by social movement organizations. For social movement organizations to emerge, grow and be effective “they are dependent on material and human resources, solidarity networks and often external interventions of prominent personalities operating from within well-resourced organizations” (Ballard, Habib and Valodia 2006:407).

Elster (1990) explained that some social movement organizations get funds from anonymous donors as gifts. These donations are voluntary, unconditional and non-reciprocal. This implies that the donors get nothing in return, not even public recognition (Silk 2004; Berthelemy 2006). Ostrander (1995) argued that the involvement of donors does not influence the organization's ideologies but it is an avenue to co-opt the donors into the organization's ideologies and policies. He also noted that funds for some organizations are raised from affected communities and individuals from minority communities and the working class. Furthermore, social movement organizations get financial support from individual philanthropists who see it as a way of giving back to the society (Lehmann 1990:174). However, Dreher et al. (2012) argue that some foreign donors push for their interest and thus, influence the activities of organizations. They noted that "donor countries tend to use aid to promote exports to recipient countries" (Dreher et al. 2012).

Dreher et al. (2012:1448) noted that social movement organizations in Germany generate funds from private donations and members' contributions which amounted to 1.1 billion Euro per annum between 2005-2007. They further added that government ministries for Economic Co-operation and Development also finance some political and clerical organizations which amount to 400 million Euros per annum (Edwards and Hulme 1996; Vidacak 2010; Vacekova and Svidronova 2014). Cock (2004:4) and Leonard (2013:16) respectively contribute to this view when they highlighted that some of the environmental organizations in South Africa get financial support from corporate institutions. Dreher's et al. (2012) contribution to the sources of funds for social movement organizations is not strong enough to stand as a means of funds for social movements. This is because, movements that depends on private donations and member's contribution is not likely to survive as some members will not be able to meet up with the contributions. Another limitation in their contribution on sources of funds for social movement organizations is that sometimes government ministries will not likely finance and support organizations that will campaign against the government policies; thus, this will lead to the hindrance in organization's growth.

Self-financing activities are another means of generating funds for social movement organizations. Self-financing activities come in the form of membership fees, sale of services and products, the use of intangible and tangible assets and the use of investment appreciation (Vacekova and Svidronova 2014:120). It is also noted that organizations generate money from non-profit incomes and standard commercial incomes. The non-profit incomes are from

private contributions, corporate contributions/sponsorships and subsidies while the commercial incomes are funds from investment and other commercial activities like rentals and commercial partnerships (Vacekova and Svidronova 2014:120). However, the sales of services and products to generate funds for social movement organizations could be very tempting as it might lure the organization more into business and neglect the major aim of why the movement emerged.

Similarly, Bromley (1985:257) pointed out that some social movement organizations funding comes from the owner's purse. He also noted that some organizations are financed by other organizations that share the same ideology. In support of this point, Haklai (2008:583) illustrated how transnational Jewish organizations in North America provide financial support to Palestinian Arab organizations in Israel. He explained that the donations are based on interest in the organization's ideologies and are driven by their ideas. He pointed out that the donations are made by large organizations such as the New Israel Fund (NIF), the Moriah Fund and the Abraham Fund Initiatives. This is a very strong form of generating funds for social movements. It is a strong means of funds because the larger organizations are already established and can support the smaller organizations to a greater extent without much threat to their existence (Haklai 2008:582-589). However, this is still questionable as peripheral organizations could be influenced or its existence could be threatened.

Fund raising campaign for a specific project is one of the means of generating money for social movement organizations. This is the most common means of generating funds for organizations to advance their goals (Vacekova and Svidronova 2014:120). However, the response to this means could be poor as most wealthy individuals might not be interested in some of the projects proposed by the organization. Another reason why fund raising for social movement organizations might be poor is that some social movement organizations emerge in local areas and some organizations focus on local issues; hence, they might not get much from the fund raising. The sections above have captured the explanations of social movement organizations, roles of social movements, theoretical and conceptual approaches to analyzing social movement and the strategies of social movement organizations. The next section will explain the process of hydraulic fracturing and its impacts. This section on hydraulic fracturing lays down the situation that necessitates the emergence and mobilization by social movement organizations.

2.7 Hydraulic Fracturing or Fracking and its Impacts

There are many explanations of the process of hydraulic fracturing or simply called fracking. For this research, the term fracking will be used interchangeably with hydraulic fracturing. Hydraulic fracturing or fracking is another form of mining. It “involves a high pressure deep drilling technique in order to break the shale underground rock structure using a mixture of water, sand and an elaborate mix of toxic chemicals creating wells to release and access the natural gas or oil trapped in rock formations” (Sishutu 2015:554). Dugan (2015:43) explained that the process of fracking contains water, sand, chemicals and gelling agents that aid in creating cracks in deep rock formation to aid the free flow of natural gas and petroleum. The process of fracking is to release gas trapped in the rock formation to move towards the surface so that it can be collected (Davis 2012:44). The chemicals used in fracking are potassium chloride, guar gum, ethylene glycol, sodium carbonate, potassium carbonate, sodium chloride, borate salts, citric acid, glutaraldehyde, acid, petroleum distillate, isopropanol and other chemicals. These chemicals like “acid helps to dissolve minerals and assists with the fracturing process by creating fissures in the rock” (Vaughan and Pursell 2010). Other chemical substances also have their unique role to play in the fracturing process; for example, borate salts maintain fluid viscosity during the process.

The process of fracking is done in two main ways. It can be done either through vertical or horizontal drilling. Vertical drilling is a process whereby a drill that runs across the surface of the land. It is not deep. Horizontal drilling runs deep into the ground of up to 150 feet and 46m high. Horizontal drilling is the best and modern method used in fracking for shale gas (Sovacool 2013:250-255). Horizontal drilling is mostly used for hydraulic fracturing because it increases and hastens production. During the process of hydraulic fracturing, the piping steels are cased with cement to protect the chemicals from contaminating underground water which are below the shale gas formation.

There are two different types of gases that could be extracted during fracking- coal bed methane and shale gas. Both gases are referred to as unconventional gas. Coal bed methane is like shale gas but it is different because it is extracted from coal beds. Coal bed methane is closer to the surface (1000 metres down) than shale gas. Shale gas is methane and natural energy trapped in rock formation deep underground. It is generated from rich organic shale. Shale gas has molecules like ethane, propane, butane and pentane. Shale gases are sources of

hydrocarbons (Boyer et al. 2011:28-29; Sovacool 2013:250-255). Hence, to extract shale gas, the rock formation must be cracked or fractured to allow the gas to move towards the surface.

Hydraulic fracturing has been proposed by some oil companies in South Africa. This is because South Africa is also one of the African countries whose natural resources and shale gas has not been exploited despite pressures from oil companies and capitalists in the country (Vermeulen 2012:149). South Africa in particular is endowed with natural minerals and biodiversity and iconic landscape (Happy Handgrenade Productions, 2011; Du Toit 2013; Warren 2013). The mineral resources of South Africa include gold, diamonds, coal, titanium, manganese, iron ore, chrome, platinum, metals, oil and gas (Boyer et al. 2011:28-39; De Wits 2011:1-9; Sishutu 2015:551). With all these natural resources, South Africa is seen as a potential country for exploration and extraction of natural resources. According to Hurmann, Lange and Eickhoff (2010:34), “South Africa is one of the most important mining countries in the world with a range of 59 different minerals being mined in 993 mines and exported to 82 countries”. In view of this, Shell, Rhino Oil and Gas and other oil companies have proposed for shale gas exploration. Their proposal involves the use of hydraulic fracturing to explore trapped shale gas in the Karoo Basin and Midlands, KwaZulu-Natal.

The quests for shale gas exploration continue to increase in South Africa; thus, the Midlands in KwaZulu-Natal province has been identified for shale gas exploration. The Midlands in Pietermaritzburg, KwaZulu-Natal is a vast geographical area and it contains a large amount of natural shale gas; thus, applications have been submitted for exploration by Rhino Oil and Gas and the SunguSungu. The SunguSungu exploration area includes: Giants Castle, Rosetta, Estcourt, Bergville and Dannhauser (Midlands Conservancies Forum 2016). The Rhino Oil and Gas has proposed to explore for shale gas in some areas in the Midlands. These areas include: Richmond, Dundee, Mooi River, Asburton Hilton, Howick, Karkloof, Balgowan, Dargle, Ladysmith, Kranskop, Weenen and North Vryheid. These areas cover an estimate of 10,000 farms and portions of natural shale gas, oil, condensate, coal bed methane, helium and biogenic gas (Midlands Conservancies Forum 2016). It is also important to note that these areas of exploration by Rhino Oil and Gas and SunguSungu are areas where the rivers in Midlands start and meet.

Since the announcement of potential fracking in the Midlands, KwaZulu-Natal, there have been great public responses and concerns against the potential impacts of fracking on the

environment and the people. In the public meeting held between Rhino Oil and Gas and the community members in Ashburton Community Hall in the Midlands, KwaZulu-Natal, the community and other environmental social movement organizations stood firm to say 'NO' to fracking (Erasmus and Umraw 2015:4). However, there are others who support the process of hydraulic fracturing for the extraction of shale gas based on the advantages of fracking for shale gas. This divide in community is also one of the impacts of fracking. Morrone, Chadwick and Kruse (2015:207) also noted that hydraulic fracturing for shale gas does not only frack the shale for natural gas but it also has the potential to frack/break social cohesions or relationships; thus, bringing about social conflicts between people in the community. Willits, Lulof and Theodori (2013:60-70) noted that some residents communities in Pennsylvania hold various and contrasting opinions either in favour or against fracking. This divide in opinion on fracking hinders community values and social cohesion in communities (Klein 2013:896). The next sections will discuss some of the economic impacts and environment and health impacts of hydraulic fracturing for shale gas.

2.7.1 Economic Impacts

There are some economic impacts of fracking for natural shale gas to the economy. These economic impacts could be seen as the advantages of hydraulic fracturing for shale gas that reflect in the economic boost of a state. The economic impacts of fracking for shale gas also aid the economy by attracting investment opportunities and generating internal revenue for the government (Davis 2012:5-17; Ebel 2012; Gordon 2013).

In the South African context, advocates of fracking for natural shale gas argued strongly that since economic stability is not guaranteed and the country is facing unemployment challenges; hence, "by conservative estimates, fracking will boost South Africa's GDP by 3,3% per annum for over 25 years; it will increase tax revenue by R35 billion per annum and will create 300 000 new full-time jobs" (Erasmus and Umraw 2015:4). This implies that fracking will create jobs from its operations for the citizens of South Africa, especially in the Karoo Basin and in the Midlands areas proposed to be fractured (Shell 2015; Botha and Yelland, 2011:9-11). However, this point is debated because the drilling and use of sophisticated equipment, machines and computers are usually done by out-sources of expert labourers and not by local residents. Local residents are only employed to do menial jobs like cleaners, truck drivers and securities (Christopherson and Rightor 2012:350-386).

Inglesi (2010:197-204) noted that South Africa is going through energy crisis. The country needs energy to boost its economy and to supply electric power to its citizens and to curb the rise of load shedding (Littlefield 2013:779-783; Kessides 2014:57-60). In response to the energy crisis, hydraulic fracturing has been proposed as an alternative because coal and other resources could no longer produce secured energy which is environmentally friendly (Byrd and Matthewman 2014:85-90). Hence, the approval of fracking will provide energy security and independence-uninterrupted, dependable and affordable availability of energy for South Africa (IEA 2014). Fracking for shale gas will provide heat and electricity for hundreds of years (Yergin 2006:69-70; IEA 2014; Hope 2014).

Sovacool (2013:252) highlighted that shale gas have low emissions of sulphur oxides nitrogen oxide and mercury than coal and oil. It is also noted that shale gas burns more cleanly than coal and emits few pollutants; thus, the use of natural gas for production will reduce carbon emission in South Africa (Gregory, Vidic and Dzombak 2011:181; Davis 2012:180;Kohler 2013:1042-1050;Gracceva and Zeniewski 2013:443-457).

One of the negative economic impacts of fracking for shale gas is that the successful production of a shale gas is complicated and expensive. This is because a lot money is spent on buying equipment, trucks, paying experts and acquiring or renting of the lands where natural shale gas is found (Sovacool 2013:249-264). Another negative economic importance of fracking is that it's environmental and health impacts will hinder tourism which is a means of generating money to the South African economy.

2.7.2 Environmental and Health Impacts

The environmental and health impacts are combined here because environmental impacts are some of the causes of the health impacts as it will be highlighted in this section. The core impacts of fracking on the environment are the contamination of underground water and water consumption in fracking. It is argued that the chemical substances used for fracking could leak underneath the shale and contaminate the underground waters (Mair 2012:12; Negro 2015; Howarth, Ingraffea and Engelder 2011:271-275). On water consumption for fracking, the Environmental Protection Agency (EPA) (2010) noted that an estimate of 2 and 5 million gallons measuring up to 7.6 to 19 million liters of water is required to successfully and effectively frack a well depending on the depth of the well. Situating this water consumption in fracking for shale gas in the South African context, it is argued that the

approval for fracking for shale gas will increase the water crisis in South Africa as most regions in South Africa are experiencing drought and water shortages (Department of Water Affairs and Forestry 2004; Blignaut and Van Heerden 2009:415-420; Nevin 2015). The contamination of underground water in the Midlands KwaZulu-Natal will be harmful to the people because majority of the inhabitants in the area are local farmers and the poor who do not have money to buy chemicals for treating water before consumption. Hence, the contamination of underground water will reduce life expectancy. It will also cause the death of livestock activities of the people in the Midlands (Taylor 2017:1).

South Africa is rich with minerals, biodiversity and beautiful iconic landscapes; hence, it is argued that it is not certain that if fracking is allowed, it will not destroy other resources under the ground and natural habitats. Thus, De Wit (2011:1-5) posited that if fracking is allowed, it will leave an irreparable scar on South Africa's beautiful environmental iconic landscapes. Another concern that follows this point is that the movements of heavy duty trucks run on the roads with considerable force will destroy the roads and fracking operations also causes traffic from trucks carrying water, sand, chemicals, gas and wastewater to and from fracking sites (Hallowes 2014:4-5-8; Wiseman 2009:1-5). Situating this in the South African context, it will cause a lot of setbacks to production of goods and services as the roads will be congested and the damage on the roads will also increase the traffic on the roads for workers and travelers.

De Wit (2011:1) argued that the people in South Africa also object to fracking because of the lack of transparency in the fracking process. There is a lack of following professional and legalized fracturing and drilling methods; thus, the public is being deceived by the oil companies. This implies that there is no implementation of prior environmental education on the processes of hydraulic fracturing for shale gas. The extractive companies do not offer adequate knowledge to the community and the people on the processes, chemicals involved and chemical effects of fracking for shale gas.

In addition, Shafer, Williams and Mook (2012) identified benzene, Toluene, Ethylbenzene, carbonyl monoxide, hydrogen sulphide, nitrogen oxides, and methane and sulphur dioxide as some of the chemicals that pollutes the air from natural gas. This polluted air in turn affects respiration and increases asthma and lung damage (Shelley 2011). Finkel and Hays (2013) also noted that the chemicals used in fracking also cause neurological, reproductive,

dermatological and gastrointestinal, adrenal, pituitary tumours, headaches, cancer and nausea issues to human health (Rahm 2011:2974-2981;Office of Research and Development 2010; Kerr 2010). Situating these health issues in the South African context and in Midlands, the effects from these chemicals will also reduce life expectancy and also inflict serious illnesses on the people in South Africa. From the previous sections, this chapter has explained the concept of social movement organizations, its roles, strategies and theoretical approaches in understanding social movement. The previous sections have also highlighted the process of hydraulic fracturing and its impacts to the environment and people in South Africa. The following sub-headings shall discuss environmental organizations in South Africa and their struggles for environmental justice in South Africa.

2.8 Environmental Social Movement Organizations in South Africa

Environmental social movement organizations in South Africa grew side by side with other social movements during and after the apartheid period from 1948 to 1994. Social movements during these periods revolted against the illegal relocation of Blacks from their native lands, oppression and poor service delivery (Robins 2008; Ballard, Habib and Valodia 2006; Leonard 2018:24). Cock (2004:1) posited that environmental social movement organizations in South Africa have no coherent base; it is a diffuse and uncoordinated struggle for environmental justice. Cock also pointed out that the environmental justice struggle is centered on three key points: struggle against environmental racism, struggle against poverty and inequality and struggle for environmental justice (Cock 2004:2).

Furthermore, Cock (2004:4) asserted that environmental social movement organizations in South Africa are divided into two streams: those focused on sustainable development and other environmental organizations organized on environmental justice. Cock noted that Endangered Wildlife Trust (EWT) and Wildlife and Environmental Society of Southern Africa (WESSA) are focused on sustainable development towards preserving biodiversity. EWT in their pursuit for sustainable development formed strategic partnerships with corporations; while WESSA work to ensure long-term environmental sustainability. Cock (2004:5) also indicated that Groundwork (GW) as an environmental organization was established to enhance the quality of vulnerable rural communities in Southern Africa; in doing this, GW adopted a critical approach in demanding corporate accountability in order to achieve environmental justice. Groundwork focuses on four main areas: air quality, health

care waste and incineration, industrial landfills and corporate accountability (Cock 2004:11). Groundwork also works with South Durban Community Environmental Alliance (SDCEA) and other environmental organizations in South Africa to enhance the health and social life of communities in the South Durban basin against industrial pollution.

Leonard and Pelling (2010:140) acknowledge that the South Durban Community Environmental Alliance (SDCEA) is also one of the environmental organizations that are advancing environmental justice in South Africa. SDCEA is an alliance of civic organizations focused on industrial issues. It was formed to reach out to local communities around South Durban in order to respond to issues of industrial pollution (Reid and D'Sa2005; Chari 2006). Similarly, Cock (2004:13) highlighted that Earthlife Africa (ELA) as an environmental organization, have strongly advanced the environmental justice discourse. Earthlife Africa was formed in 1988; its work covers both social and environmental justice on local, national and international levels. In 1998, Earthlife Africa organized a march at the Durban harbour against nuclear waste shipment. ELA also work with other organizations, such as Groundwork, WESSA and Sasolburg Environmental Committee to prevent the proposal of incinerators in Sasolburg. Earthlife Africa focuses on sustainable energy and climate change on issues of climate change and nuclear energy (Cock 2004:14-16). A major approach adopted by Earthlife Africa to realize its goals was to form alliances with unions, local and international environmental organizations. This was seen in their alliance with Chemical Workers Industrial Union and Greenpeace International to take up actions against Thor Chemicals, which had poisoned the drinking water of a community in KwaZulu-Natal (Khan 2002:30; Death 2014:1215-1234).

Cock (2004:1-6) pointed out that Environmental Justice Network Forum (EJNF), Groundwork, Earthlife Africa and South Durban Community Environmental Alliance Africa are key environmental organizations at the forefronts of environmental justice struggles in South Africa. Other notable organizations are Environmental Monitoring Group (EMG), Vaal Environmental Alliance and South African Water Caucus (SAWC) (Cook 2007:40). Furthermore, Cock (2004:9) asserted that the environmental justice struggle took a bottom up perspective which entails reaching out to grassroots communities, provincial and national government levels in influencing policymaking decisions on the environment. However, Leonard (2013:12-13) acknowledged that some conservation environmental organizations who receive funds from corporate sponsors had difficulties engaging with

environmental organizations because they could not challenge their funders. This shows the influence of sponsors in the activities and strategies of some organizations. Leonard (2013) further argued that the limitation among environmental organizations was that some conservation organizations did not view environmental justice as a great concern. Another limitation was that some environmental organizations have limited human and financial resources; thus, this hinders networking among environmental organizations. On this view of environmental social movement organizations in South Africa, the next sub-section will focus on the environmental justice struggles in South Africa.

2.9 Environmental Justice Struggles in South Africa

Environmental justice struggles in South Africa are of two periods or phases: the apartheid period and the post-apartheid period. Leonard (2018:23) noted that during apartheid, Black South Africans were exposed to environmental racism—the removal of Blacks from their native lands, discrimination on environmental policymaking, targeting of Black communities for toxic waste and the enactment of laws against Blacks (Cock and Fig 2002; Roberts 2003; Bond 2004; Ballard et al. 2005; Leonard 2013:2). During the apartheid period, environmental issues were neglected and silent. There were no serious mobilizations against environmental issues (Cock 2004; Death 2014:1215-1234). The post-apartheid phase marks the contemporary environmental issues such as hydraulic fracturing, pollution and health effects from oil and chemical industries (Di Chiro 1995:304; Bullard 1994; Khan 2002; McDonald 2002:1). The post-apartheid phase also involves the struggle against environmental capitalists in South Africa.

An example of environmental racial oppression in South Africa during apartheid was when “whites-only policies in national parks meant that black South Africans could not enjoy the country’s rich natural heritage and draconian poaching laws kept the rural poor from desperately needed resources” (McDonald 2002:4). This point on environmental racism during the apartheid period meant that the blacks were deprived of their ancestral lands in order to build parks and game reserves; thus, the people lost their roots, religion and lands to capitalism and to environmental and social oppression (Cock 2007; Leonard 2013:3). Another apartheid policy was the Group Areas Act (1950) that restricted blacks from some areas (Leonard 2013:4-5). This also means that despite leaving their ancestral lands due to environmental racism and oppression, the blacks were also deprived of the joy of entering the

parks and game reserves (Cock 2007; Leonard 2013:3). As a result of this, there was not much attention given to environmental issues because it favours the minority in power (capitalists) and the apartheid government.

During the apartheid period, the approach to environmental justice was characterized by preservation and conservation of species (Khan 2002:15). However, this was rooted in environmental racism because blacks were not involved in the conservation of the species. This conservation process involved mainly the educated, elites and white minority; while the blacks were alienated because of their lack of knowledge on conservation and also because of their colour, social, educational and environmental experience (Steyn 2004; Cock 2004; Leonard 2013:4). This is seen in the activities of the Western Districts Game Protection Association and the Transvaal Game Protection Association (TGPA) where membership is for the affluent gentlemen. This membership for affluent gentlemen was to support the fact that the whites are more exposed and that Africans (black South Africans) were not exposed; thus, they (black South Africans) will be tempted to hunt the species for consumption. This was rooted in the assumption and stereotyping that Africans are environmentally destructive (Carruthers 1995:31).

Environmental racism continued during the apartheid period. However, there was an emergence of black environmental social movements during this period of environmental racism. This was the emergence of Native Farmers Association (NFA), that raises concern on access to land and soil conservation which was common to blacks (Khan 2002:19-20). However, the efforts of the NFA were not fruitful as the whites and governments were against their policies and goals. The government policies on the environment and agriculture were also biased to favour the white minority (Khan 2002:19). Under the apartheid regime, environmental racism moved into politics and environmental issues were politicized (Khan 2002). This affected both the spiritual, emotional, social, environmental, health and physical wellbeing of the blacks.

The post-apartheid phase of environmental issue in South Africa is the contemporary environmental issues. This phase is characterized by climate change, waste, pollution, carbon emission, and proposal for hydraulic fracturing, deforestation, work hazards and the rise of capitalism that destroys the environment in South Africa. Unlike the apartheid phase, this phase saw much support from grassroots and black communities in environmental

organizations against environmental issues. For example, there were protests and demonstrations against plans to site a nuclear power station against toxic waste recycling plant (Khan 2002:28). Community based organizations in both rural and urban areas also took up green campaigns and projects.

The post-apartheid period saw the redefinition of the environment to include everyone irrespective of race. This period also saw academics, business unions and non-profit organizations joining and taking up environmental campaigns in their respective sectors (McDonald 2002:2). This was evident as trade unions began to incorporate environmental policies into industrial policies, such as workers-health and occupational safety. During this period, communities also stood up against environmental racism. This was displayed by the Richtersveld Northern Cape farmers refusing to be evicted from their ancestral land in order to make way for the development of national parks. This period also saw the emergence of new environmental organizations challenging environmental practices and policies that existed in the apartheid period and they also express great concern for the poor and marginalized in rural areas (McDonald 2002). Khan (2002:27) further stated that when environmental issues were perceived as a civil right issue, blacks became more active in environmental justice movement in South Africa; thus, this gave birth to environmental movements such as EarthLife Africa in 1988.

From the explanations of environmental social movement organizations and the highlights of their struggles for environmental justice above, Death (2014:1215-1234) remarked that South Africa is a fertile ground for environmental organizations to emerge and grow because of the well-resourced and supportive individuals and institutions that have surfaced on the environmental discourse in South Africa. He elaborated that environmental organizations such as World Wide Fund (WWF), Peace Park Foundation, Wildlife and Environment Society of South Africa (WESSA), Endangered Wildlife Trust (EWT) and others have corporate sponsors and links to strong institutions that are supportive in achieving environmental justice. He further acknowledged the progress by environmental organizations on environmental issues like climate change, sustainable development and influence on policy implementation in the country. However, he highlighted that the environmental social movement organizations are careful in confronting the government, political elites and corporate sector for social change. Hence, this has become one of many other limitations to

the growth of environmental organizations in the struggle for environmental justice in South Africa.

Despite the limitations, Death (2014) acknowledges that some environmental social movements in South Africa such as Groundwork, Earth-life Africa and the South Durban Community Environmental Alliance (SDCEA) have been able to confront governments and corporate institutions in the struggle for environmental justice. He illustrated this by highlighting that these organizations have taken up controversial environmental issues like industrial pollution, toxic, genetically modified organisms, climate change and nuclear power that the government and capitalist minded individuals have seen as a threat (Munnik and Wilson 2006:72; Cock 2007:43). To highlight a few successes in the environmental organizations' progress, Thor chemicals in KwaZulu-Natal was held accountable for damages related to toxic chemicals and health concerns. Save St. Lucia mobilization was able to gather signatures to stop Richards Bay Minerals from metal mining in the dunes; and the legal case against nuclear programme at Koeberg, Cape Town which held Pebble Bed Modular Reactor accountable for not administering the Environmental Impact Assessment process. In Durban, the South Durban Community Environmental Alliance (SDCEA) have been able to mobilize the people against air and water pollution in the South Durban Industrial area (Ballard et al. 2005; Ballard, Habib and Valodia 2006; Leonard 2018:32-33).

2.10 Conclusion

This chapter focused on understanding social movement organizations, environmental organizations in South Africa and their struggles for environmental justice and also explored the process of hydraulic fracturing and its impacts on the environment. From the discussions in this chapter, it can be deduced that social movement organizations in general serve as an alternative to a nation's democratic, social, economic representation. It therefore follows that the goals and concerns of social movements organization, especially environmental social movement organizations, will continue to serve the purpose of representing the poor and the marginalized in the society; thus, seeking for altruistic good. In its call for justice, social movement organizations will also continue to be "up against the inherited and accumulated legitimacy of bourgeois/capitalist representative democracy as practiced" (Mckinley2006:424). This also implies that in the pursuit of environmental justice and all other forms of justices that can be deduced and applied to environmental issues,

environmental social movement organizations in all their activities will continue to represent the poor and the marginalized in all aspects of the society especially against the dangerous impacts of hydraulic fracturing despite its economic importance.

Sometimes social movement organizations and environmental organizations are accused of being pessimistic against development, opportunities, investments, employments and good infrastructure in the society. This accusation stems from the strategies of social movements and constant protests against government policies and companies that do not seem to offer a long-term development to the society and the people. However, saying that social movement organizations and environmental organizations are pessimistic and against development is a miss understanding of their motives and roles in the society. If one takes a proper analysis at the motives and roles of these social movement organizations, in particular, environmental organizations, one will find out that they are not against development and opportunities. What they are against are short-term developments, short term investments and opportunities that will cause long term damages to the people and the society and will be expensive to recover or restore (Taylor 2017:6). Thus, in the researcher's view, social movement organizations and environmental organizations are "Development Visionaries"- those who see beyond the plan in development and see the hidden or blind side in development.

CHAPTER THREE: ENVIRONMENTAL JUSTICE, KARL MARX'S VIEW ON JUSTICE AND SOCIAL JUSTICE

3.1 Introduction

The society in which we live is filled with inequalities and exploitation of rights; hence, justice is vital to eradicate the inequalities and exploitations of rights in the society. The conceptualization of justice is seen by scholars such as Rawls (1971), Miller (1999), Barry (2005) and Premdas (2016:449-462). Justice can be viewed and achieved on various perspectives, such as environmental justice, human rights justice, economic justice, social justice, and political justice and many other forms of justice that can be identified and described.

The previous chapter explored the conceptions of social movement organizations. This theoretical chapter will focus on three different forms of justices: environmental justice, Marx's views on justice (economic justice) and social justice that are explained and linked together in order to show the factors and concerns that inform the mobilizations of social movement organizations. The chapter will also highlight the links between the three forms of justices. These three concepts of justices are employed in this research because most often environmental justice struggles and mobilizations are basically informed by environmental justice and social justice (Taylor 2017). Hence, Marx's views on justice (economic justice) are brought here to expand environmental justice struggle by environmental social movement organizations in South Africa to include the richness of economic justice in Marx's views.

3.2 Karl Marx's View on Justice

Before the explanations of Karl Marx's view on justice; it is important to state clearly that this part of Marx's view of justice does not focus on his critique of capitalism; rather it highlights and discusses the ideas of justice embedded in his critique and condemnation of capitalism. Highlighting Marx's views on justice is significant to this study as it connects with environmental justice and social justice (Camacho 1998; Patel 2000). Marx's view on justice is also relevant to this study because it reveals the richness of economic justice that can be employed by environmental organizations in discussions of environmental issues and in their struggles and mobilizations against environmental capitalists.

Many scholars are divided on the ideas of justice in Marx's critique of Capitalism. Wood (1972) argues that Marx's critique of capitalism holds no justice because Marx did not explicitly state that capitalism is unjust. Wood (1984) argues that Marx did not specify any standard, norm, and a clear definition of justice in his critique of capitalism. However, adherent of Marxism argued that Marx did have ideas of justice in his critique of capitalism. Scholars such as Van de Veer (1973), Husami (1980) and Stoian (2014) who holds that justice is part of Marx's condemnation of capitalism, argued that Marx's definition of justice has an implicit and explicit substantive conception of justice. This means that Marx's view on justice is linked to the broader view of justice. Marx's idea of justice denotes economic equality-which gives rights to every individual in the society to receive the same amount of resources regardless of occupation, skill and work. This is the conceptual definition of Marx's view on justice that will be used for the purpose of this research. It is the conceptual definition for this study because justice in Marx's idea is to remedy the exploitation of workers (Van de Veer 1973). In this view, Marx was articulating economic justice- which remedies economic inequality and could also eliminates social and environmental injustice. It is also the conceptual definition for this study because it expresses the idea of equality (fairness and justice) which is also expressed in environmental and social justice which both forms the theoretical framework of this research.

The contextual significance of Marx's view of justice to this research is that Marx was in the forefront of the early societal activists (social movement organizations) who advocated for justice and fair distribution of societal resources (Stewart and Zaaiman 2015). Thus, it is important to lean on Marx's paths in attaining justice for the environment as he was able to speak out against injustice and marginalization in a strong state of government; unlike the liberal and democratic society and governance of today. Hence, the environmental social movement organizations in South Africa and the organizations interviewed in this research are the contemporary Marxists, advancing for fairness and justice on environmental issues in the economy, social and political settings.

To comprehend Marx's view of justice, we must understand it from his theory of class. Marx explains two types of classes- the bourgeoisie (the rich/capitalist class) and the proletariat (the poor or working class) who are exploited by the bourgeoisie (Stewart and Zaaiman 2015; Chellan 2016:3). Furthermore, in the *Capital*, Marx posited some criteria of "class", namely; the ownership of property and capital and the second criteria is based on class-consciousness

in life-style, norms and beliefs. This means that each class shares a perception of their class position, which is vital in a way that affects their activities. For example, those who own the means of production consciously know the class they fall into and their life-style, beliefs and values reflect their class; this is also the same in the case of those who do not own the means of production (the poor). Marx also explained that each class undergoes a class formation in which each class develops a shared economic interest. Marx further asserted that the economic characteristics of each class will also determine the political characteristics of the class and members.

In Marx's view of justice, capitalism is unjust because each person has rights to the full distributive value of social resources. The principles of distributive justice regulate the structure of social institutions and to ensure fundamental rights and duties (Rawls 1971). This view of Marx that attests to distributive justice is perfectly linked to the ideas of justice expressed in social and environmental justice as the concepts advocates for distributive justice and equal rights. Situating this view to this research, the environmental organizations (modern Marxists) will lean on Marx's thoughts to argue that fracking in the Midlands is unjust as it only benefits the rich and exploits the poor communities of their rights to full distributive value of environmental resources and clean environment. Hence, it undermines the ideas expressed in distributive justice that Marx adheres to. This also shows the relevance of Marx's view on justice to this study.

Marx's view on justice is also conveyed when he condemned capitalism on the basis that it encourages alienation which he sees as unjust. Alienation to Marx means that the workers are seen as alien objects- that which is outside and the workers does not work creatively; the workers work to satisfy the capitalist needs. The capitalist also alienates the workers by deciding what to produce and how the product should be distributed (Evans 1975:92). Lange (1968) and Macpherson (1962:56) also pointed out that alienation is displayed when workers are deprived of the right to demand equal wages from production. This point links to the environmental struggles highlighted in South Africa above as it is easy to see that, just as the workers are alienated in the work place, so also were the black South Africans alienated from participating in the conservation of natural species and denied entry into the parks and game reserves. It is seen that through Marx's lens, the people (workers and black South Africans) are alienated from the resources (economic, social and environmental resources) and that in itself is injustice. Hence, in this sense of alienation, there is justice in Marx's critique of

capitalism. This justice expressed by Marx implicitly or explicitly links to the ideas of social and environmental justice and to the broader views of justice.

In analyzing Marx criticism of capitalism, Sherman (1972:58) added that capitalists own the means of production but put no effort of labour in the production yet they receive surplus income from the production. This is also captured in the *Capital*-where Marx charged the capitalists of robbing workers of labour products without contributing or adding value to the production (Hollis and Nell 1975:18). Marx showed that “the labour product of working men and women are alienated in that it is appropriated by the capitalists or the owner of the means of production” (Wei 2008:473). This shows the exploitation of workers and accumulation of surplus values by capitalists of which Marx out rightly negates as unjust.

Husami (1980:24; Cohen, Nagel and Scanlon 1980) also added that exploitation sets class against class in the society. Hence, the capitalist’s exploitation of the proletariat is seen in the domination of capitalist class and accumulation of surplus values in which the capitalist is passive in the production processes. This shows the injustices of capitalism and at the same time it displays the concept of justice in Marx’s thoughts (Husami 1980; White 1996:89). The exploitation of workers here can also be linked to the forceful exploitation of Blacks South Africans from their ancestral lands (environmental racism). Thus, there is a link in Marx’s call for justice against exploitation and the call for justice in environmental and social justice against the exploitation of lands from the blacks as expressed in environmental racism during the apartheid period (Leonard 2018:23; Cock 2004:5; McDonald 2002:1; Di Chiro 1995:304; Bullard 1994; Khan 2002).

To further highlight the idea of justice in Marx’s thoughts, Daly (2000:351) argued that Marx condemnation of “capitalism is not only a moral injustice, but an ontological injustice, a violation of the worker’s humanity. It is coercion into alienation, fetishism and idolatry”. In this, it is seen that Marx viewed capitalism as a violation and an unjust system because the workers are forced to sell their essential human skills (labour power) and thus, worship the owners of production (Daly 2000:354). It is a moral injustice and ontological injustice because the workers lose their essence and dignity of being a human being and see themselves as mere machines used for production. This aspect of ontological injustice which denotes the loss of sense of human dignity also connects to the environmental racism above where the Black South Africans also lose their sense of human dignity when they were driven

from their ancestral homelands. This connection shows the link between Marx's view of justice, social and environmental justice as the concepts advocates for the reinstatement of justice to human dignity in economic, social and environmental spheres. Stoian (2014:53) also agrees with Daly (2000) that capitalism is criticized based on moral injustice. This is deduced from Marx's use of terms such as robbery, embezzlement and fraud to explain the way in which the employer steals something from the workers. The focal point is that there is a relationship between the terms and the notion of non-moral (injustice); Cohen (1995:5) posited that "one cannot describe something as robbery and at the same time claim to describe it as a just situation". Marx uses these terms to show in justice in the unequal distribution of the surplus profits made from production.

To also capture justice in Marx's thoughts, Yenigun (2013:308) picked out terms used by Marx in the *Capital*. Yenigun pointed out that if there were no justice in Marx's thinking, "why should Marx want us to care about terms/words such as alienation, dehumanization, self-realization, free development or emancipation"? (Yenigun 2013:308). In highlighting these terms used by Marx, Yenigun implies and sees justice in Marx's critique of capitalism. This is because these terms signify and speak of justice; and they are employed to condemn unjust situations and acts. The terms development and emancipation and transformation also reflects in the explanations of environmental and social justice as the terms are used to convey ideas of justice in the various fields. Thus, this shows the link between Marx's justice, social and environmental justice.

In another analysis, Daly (2000) saw justice in Marx, in his work, *The Critique of Hegel's Philosophy of Right: Introduction*. In this article, Marx elevated the proletariat as the universal class, whose good is central to the whole of human race. It is "a class with no property, therefore it has no need to exploit any other class; it has only the radical human need-our need to relate to each other as human beings and not as masters or slaves" (Daly 2000:353). Justice for Marx here is a communal justice (distributive justice) which can only be achieved in a society where there are no masters or slaves. Marx envisaged a society where everyone has equal rights and belongs to one class (the universal class). The aspect of communal justice in Marx is very much laden in the explanations of environmental and social justice where communal and altruistic justice for everyone is at the centre of the concepts. This shows another link between Marx's view of justice, social and environmental justice in this study.

Marx also pointed out that the value of a product is created by the labourer employed to produce it. However, the capitalist rewards the labourer with a little part of the value; by doing this, labourers are deprived of their just wages equal to the value of the products. In pointing this out, Marx shows that the wages paid to labourers do not equate the surplus profit accumulated by the capitalists which is a clear proof of exploitation of the labourer's labour-power and talent which is unjust (Hancock 1971:65). For example, a labourer is employed to work on a farm. The labourer plants the seeds and after a period of time, the seeds yield much fruit. However, when the products are sold, the labourer is paid a little (the wages) while the capitalist accumulates all the surplus profits. This implies that under capitalism, labourers receive disproportionate wages, which is unjust. This relates to this study because it reveals the fact that the people living on the environment are not given a fair share of the environmental resources, just as the case of environmental racism. Marx's call for justice on this point is in line with the ideas expressed in environmental and social justice that attests to fair distribution of the surplus values of production and wages that is proportional to the goods produced (Van de Veer 1973:371; Elster 1985; Rashid 2002:448).

However, an objection to the above highlights of justice from the criticism of capitalism, those who did not see justice in Marx's thoughts argued strongly that there is communicative justice (communication-agreement) between the capitalist and the labourer before production. This stands as a strong objection to the attribution of justice to Marx. Communicative justice implies that there is a bargaining process in which the parties accept or reject the other's offer. Thus, with the application of communicative justice, the wages paid to the labourers are not unjust under capitalism; rather, it is just because there is an agreement between both parties and it follows the principles of bargaining in the capitalist economy. Tucker (1969) argued that capitalism is perfectly just because the transactions are done within the mode of production. This implies that all encounters and bargains between the workers and owners of production are done in the context, norm and principles of the capitalist system; therefore, capitalism is just. This shows that there is no coercion or fraud under capitalism since the labourer freely accepted the offer (Hancock 1971; Hobbes 1996).

In response to the objections above, proponents of Marx's view on justice disagrees with the capitalist on their claim of communicative justice between the labourer and the capitalist. This is because during the bargain, the capitalist does not consider the economic circumstance (unemployment, limited resources and more labourers willing to work at any

rate of wages paid) and the capitalist is blinded with personal interest. Hence, the capitalist is not aware of the economic and social situations that surround the labourer during the bargain. Or rather, the capitalist is aware of the economic situation and uses it as an advantage and an avenue to exploit the labourer. Based on this, proponents of justice in Marx's thoughts argued that the labourer is not as free as the capitalist during the bargain. The labourer is not free due to the poor economic situations, (unemployment, limited resources and more labourers) the labourer has no option than to accept the offer during the bargain. This shows that the labourer is forced to accept the offer because the only alternative is starvation and unemployment. Thus, there is injustice because of the unequal economic situation that surrounds the labourer and the capitalist during the bargain (Hancock 1971:68).

In another response against the objection presented above, it is important to note that the capitalist system of justice is limited and cannot be incorporated or equated to an objective and ideal concept of justice of which Marx, social and environmental justice proponents adheres to. This is evident in Van de Veer's (1973:366) rebuttal of Tucker by asserting that "Marx adheres to a different and superior principle of distribution and justice; thus, the process praised by Tucker must be regarded as unjust".

In addition, to respond to the objections above, there should be no justification for capitalists to accumulate surplus profits because the capitalist and labourer's inputs in the process of production cannot be equated. The labourer's inputs (labour power and talent/skills) are of greater value than the capitalist's inputs (means of production). The labourer's inputs are greater because they add value and yield more profits to the product (Husami 1980). The labourer's inputs are greater because if there is no labourer, the machines and other means of production will be useless. The capitalists will also argue that without their inputs (means of production) the skills and talents of the labourers will not be useful. Following this line of thought from the labourer and the capitalist, it is important to hold and conclude that the labourer and the capitalist's inputs are necessary for production. Based on this, there should be no justification for capitalists to accumulate surplus profits than the labourer because they both complement each other for production and surplus profits to occur. With these thoughts in mind, proponents of justice in Marx seek for equality, justice and fair distribution of the surplus profits of production since they both complement each other. The complementary elements in Marx's view on justice in this response can be deduced to link social and environmental justice. They are linked because social and environmental justice sees people,

the society and the environment as complementing each other. Thus, the exploitation or neglect of the other will bring about inequality and injustice.

In showing the links of Marx's conception of justice to the broader conceptions of justice, it is necessary to note that the justice Marx advocated for in his critique of capitalism conforms to the ideas of justice displayed in the principles of environmental and social justice. Hence, Marx's justice, environmental and social justice are connected in their ideas and they can be used to address similar issues such as environmental issues of hydraulic fracturing. The three justices speak of equality, fairness and distributive justice. In this light, it is worthwhile to now highlight some of the conceptions of social justice.

3.3 Social Justice

The term social justice was introduced in the society and political arena by social analysts such as John Stuart Mill, Leslie Stephen and Henry Sidgwick. The term was used alongside distributive justice at a time when economic and social institutions were under ethical scrutiny and when the responsibility of the state was increasing and challenging. Barry (2005) highlighted that social justice entered into social and political discourse from capitalism. This is because capitalism was seen as unjust to the people in the society; thus, the concept of social justice was introduced to advocate for social and economic justice. It is held that the modern conception of social justice started in the 18th century as a child of the Industrial and French revolutions (Jackson 2005:356-373; Brodie 2007:95). The term became popular in the 19th century as states and institutions began to advocate for social goals (Premdas 2016:449-457; Fleischacker 2004). Social justice was further adopted in the 20th century when liberal democracies and socialism grew stronger (Leiby 1978; Brodie 2007:95; Reisch 2007:67-92; Ilean and Lacey 2013:1-5). Social justice was adopted by liberals to critically analyze land ownerships, private properties and inherited wealth in order to charge the state to implement laws and structures that will bring about distributive justice (Miller 1999:3). From this, we can deduce and imply that social justice is an ideal concept in evaluating civilization and the enlightenment of humans in the distribution of social resources enactment of justice.

Social justice analysts argue that for social justice to be achieved, it requires a strong state and institutions in which economic and social differences between social classes and groups will be reduced (Jansson 2005:24). Miller (1999; McCarthy 2010:242) added that the state and institutions facilitate distributive justice, with appropriate consideration of needs,

citizenship and rights. Thus, outside strong state and institution, social justice will be elusive (Dobson 2003; McCarthy 2010; Ekanga 2005). This view by Miller firstly, shows that social justice entails distributive justice and this also shows the link between social justice, Marx's view on justice and environmental justice because they all speak of distributive justice in their various fields. The second part of Miller's conception of social justice also means that social justice appeals to the state and institutions to implement policies and laws that foster justice. In this explanation, there is a link between the three forms of justices as they call on the state and institutions to implement policies that promote justice. To extend this point on social justice, Rawls (1971:7) explained that state and institutions are the conveying objects of justice. This is because the institutions and state are the avenues through which justice is administered. The state and institutions define and defend the rights and duties of the people by upholding human rights of equity, equality and fairness in all aspects of the society (Gewirtz 1998:469-477; Theoharis 2007:223). An extended explanation of social justice and its relation to state and institution is that social justice applies to people (individuals) who share national identities and live in a society and institution with bonds of solidarity that override personal interests in the distribution of societal resources (Miller 1999:18).

Miller (1999:1) noted that social justice addresses how the benefits and downside of life should be distributed among members in the society. Hence, when state policies and individuals are condemned for being unjust in the society, it implies that the policies favour a few in the society. Hence, social justice negates individualistic principles towards the distribution of societal resources. It aims to empower citizens who are deprived by the competitive market (Premdas 2016:449-453). This explanation of social justice buttresses the distributive nature of social justice and it also links to the idea of distributive justice in Marx's view on justice and environmental justice. Thus, there is an agreement between the three concepts as they underpin, inform and serve as a theoretical framework for this research.

Similarly, Ekanga (2005:89) posits that social justice is about fairness and equality of opportunity. Social justice urges people to be responsible for their actions and consequently to approve or condemn their actions. Social justice is also employed to be a fulfillment of deficiency. This implies that those who cannot help themselves need to be helped. Hence, "need" becomes a basis and part of social justice. This aspect of social justice comes from a Judeo-Christian tradition that holds firm the values of universal love, charity, altruism,

cooperation and self-sacrifice. The need side of social justice arises from or relies on fairness and equality (Ekanga 2005). This means that from the Judeo-Christian perspective, everyone is treated fairly and seen as equals living in a community of oneness. The fairness aspect of social justice shows its link with Marx's view on justice (Marx calling for fairness in the sharing of surplus profits) and environmental justice (calling for fairness in the use of the environment and access to environmental resources).

In conceptualizing social justice, Premdas (2016:453) highlighted that social justice deal with issues of marginalization, oppression, exploitation and discrimination. Thus, social justice is applied to these issues to justify the need for redistribution of resources (material and symbolic) and the adjustment of social and political institutions to restore rights, equality, equity and justice to the marginalized. This aspect of social justice is perfectly linked to the concepts of environmental and Marx's views on justice as they all speak against marginalization, oppression and exploitation. This explanation implies that social justice fits in this study and explains why social justice is one of the theoretical frameworks. Thus, in view of the explanation in Premdas (2016) view, environmental organizations are motivated in their mobilization to end the social, economic and environmental marginalization, oppression and exploitation of the people. From the link established between social justice, Marx's view on justice and environmental justice, the following section and subsections will highlight some explanations of environmental justice.

3.4 Environmental Justice

The concept of environmental justice is very broad and there is no specific definition. However, there are similarities in explanations. The concept of environmental justice arose when the First National People of Color Environmental Leadership Summit was convened in 1991 in Washington, where delegates from North and South America were present. The principles of environmental justice were laid out in the Summit which brought many people together in agreement for a new approach to the environment (Di Chiro 1995:307). Before the birth of environmental justice principles in the Summit, environmental justice was perceived to entail justice and equity in regards to distribution and redistribution of environmental benefits and burdens and to ensure that affected communities do not suffer disproportionately from environmental hazards (McDonald 2002). However, the Summit "broadened the environmental justice principles beyond its anti-toxics focus to include issues

of public health, worker's safety, land use, transportation, housing resource allocation and community empowerment" (Khan 2002:27). This means that environmental justice does not only focus on issues related to the environment but it also encompasses the general welfare and justice for the people in the society (Camacho 1998).

Bullard (2005) explained that environmental justice seeks to prevent environmental threats. These environmental threats involve unsafe industrial and housing issues; land degradation and health issues (Bullard 2005:23). This aspect of environmental justice also tallies with Khan's (2002) view above. It also shows that the term environmental justice is generic and can be applied to various aspects of life and issues of inequalities, threats and exploitation. McDonald (2002) and Leonard (2018:25) respectively argued that environmental justice entails the inclusion of environmental issues into the framework of human rights and democratic accountability. Rhodes (2003) added that environmental justice seeks to eliminate environmental racism and exclusion of specific ethnicity from environmental policy making. Patel (2000) also argued that environmental justice entails that the poor do not suffer the costs of industrial production and over-consumption by the rich. This view of environmental justice by Patel (2000) buttresses the significance of Marx's views of justice. This is because the explanation identifies economic related issues. Patel's (2000) views also links Marx's view of justice, environmental justice and social justice as the explanation covers environmental, economic and social issues. For the purpose of this research, environmental justice shall be conceived as a framework that seeks to eliminate discrimination and exclusion of any ethnic group from environmental discourse and to also foster justice and equality in the distribution of environmental resources and at the same time, to protect citizens from environmental hazards. This conception of environmental justice captures the three forms of justices: social, environmental and economic justice (Marx's view on justice) expressed in this chapter.

Holifield (2013:78-90) pointed out that environmental justice incorporates distributive justice- which is the distribution and redistribution of lands and environmental resources among everyone. It incorporates procedural justice- which gives rights to citizens to partake in the decision-making processes. Holifield (2013) further explained that "environmental justice also means ensuring that minority and low-income populations benefits proportionately" (Holifield 2013:81). In addition, Bullard (1996; Bullard and Johnson 2000) cleared this point by explaining that environmental justice works to eliminate unfair, unjust

and inequitable conditions and decisions for the people. This also buttresses the relationship between environmental justice, Marxist justice and social justice as they all advocate for the liberation of the marginalized and seek just compensation for the affected group in the society.

In situating the emergence of environmental justice in the context of South Africa, Khan (2002:20-27) pointed out that the history of environmental justice movement in South Africa started in the 1990s. The term environmental justice was first introduced in South Africa by Earth-life Africa in 1992 in Johannesburg at a conference entitled “*What Does it Mean to Be Green in South Africa*”? (McDonald 2002:2; Lukey 2002). The conference gave birth to the Environmental Justice Network Forum (EJNF) “a nationwide umbrella organization designed to coordinate the activities of environmental justice” (McDonald 2002:2). It was set up to identify and respond to the need for an umbrella organization to coordinate and network environmental organizations towards environmental and sustainable development (Cock 2004; Leonard 2018:26; Sangonet 2006). EJNF has been functioning in all 9 Provinces with 8 Provincial offices. However, these 8 Provincial offices were not performing as expected. In response to the underperformance, its management embarked on restructuring and instead of having 8 Provincial offices, they opted for clustered offices which consist of Johannesburg national office, Coastal office, Central office and Northern office (McDonald 2002). The creation of the clustered offices was to help EJNF work effectively. Currently, the clustered offices has not being successful enough for effective performance due to EJNF crisis in leadership and failure to address grassroots environmental injustices concerns (Cock 2004; Sangonet 2006; Leonard and Pelling 2010). From the explanations of the three theories, it is proper to show how they all work simultaneously in their application to environmental, economic and social issues.

3.5 Relationships between the three forms of Justices

In the explanations of the three forms of justices above, some of the relationships between the three theories have been highlighted. The ideas of justice in Marx’s thoughts, environmental justice and social justice are connected in their conceptualization as they portray and adhere to objective views of justice. Marx’s view of justice is perfectly tied to the ideas of social justice which in turn tally with environmental justice. Hence, when environmental justice is linked to social justice, it also covers Marx’s view of justice.

Agyeman (1978:232-236) explained that due to inequalities in the distribution of environmental benefits and damages, which affects mostly the poor and marginalized, it is impossible to sideline environmental issues from social and economic issues; they are inseparable (Agyeman 1978:235). This is because environmental issues always lead to the emergence of human rights and environmental organizations which hold a joint concern for environmental and social justice. This is evident in Brazil where the Green Environmental Movements “jointly campaign for the rights of indigenous forest dwellers and against commercial deforestation” (Agyeman 1978). Likewise, the dumping of nuclear waste in Benin has also caused the emergence of human rights and environmental organizations that focus on social and environmental justice. So also the proposed hydraulic fracturing in the Midlands has caused the emergence and mobilization of environmental organizations and human rights activism. These explanations, shows that the three forms of justices are linked together as they all concern human rights, social and environmental justice and they all disapprove of economic exploitation of environmental resources which Marx advances in his *Critique of Capitalism* (Regan 2012:1-29).

Capek (1993) highlighted that social justice must be included in issues of the environment and green campaigns for everyone to claim their social rights on the environment. Thus, social justice and environmental justice emphasize the rights to:

- (a) accurate information about situations
- (b) a prompt, respectful and unbiased hearing when contamination claims are made
- (c) democratic participation in deciding the future of the contaminated community
- (d) compensation from parties who have inflicted injuries on victims
- (e) elimination of environmental racism (Capek 1993:8).

These rights are what the three forms of justices in this research advocates for and these are also the same rights sought for by the environmental social movement organizations examined in this study. In a vivid way, this captures the connection between the theories in this research.

Following the conceptualization of the three forms of justices above, we are enlightened to see that all three justices are directed to states and institutions in the society to implement policies that bring justice to everyone (Rawls 1971; Premdas 2016; Miller 1999; Jansson 2005). Young (1990b) captured this by positing that “a just society is one that facilitates the development and exercise of persons’ capacities and expression of their experience, a just

society that provide opportunities for persons to participate in decisions that shape their lives". Young (1990b) also argued that social justice, Marx's view on justice and proponents of environmental justice move above the distribution and redistribution of societal goods to democratize institutions and states by challenging policies and structures of marginalization and also to assert the recognition of human rights and cultural identities. This means that the three justices foster justice and fairness in all aspects of the state and institutions.

Environmental hazardous impacts on the environment and the people also lead to environmental, social and economic issues such as land/resource exploitation, pollution and health issues. This point to the fact that human negative impacts on the environment affects the environment and exposes humans to environmental, social and economic danger. This implies that the three forms of justices explained in this chapter centers on humans (the people).The three concepts advance the development and betterment of the human person (Beltran, Hacker and Begun 2016:493-502). So this implies that the harmful effects of humans on the environment can as well lead to environmental, social and economic effects. For example, if fracking is allowed on the environment, it can be argued that the chemicals will contaminate underground water and this will result to environmental, health, economic and social effects. Hence, due to these negative impacts of fracking mentioned in chapter two, social justice, Marx view on justice and environmental justice can be employed by the environmental organizations examined in this research to address these environmental issues that would become social and economic issues. This shows that social justice and Marx's view on justice does not only address economic, social and political issues but can also be employed along with environmental justice to tackle environmental issues (Kasperson and Kasperson 2001; Bolan 1994; Beltran, Hacker and Begun 2016).

Another relationship between the three forms of justices is that they are transnational concepts of justice. This means that they are not specific or focused on a particular region or country but they can be used in any region or country (Salazar and Alper 2011:767-784). This is seen as the environmental organizations and human rights activists in New York, Pennsylvania, Germany and South Africa all employ the concepts of social justice, environmental justice and Marx's view on justice to stop fracking in their various countries.

Social justice and Marx's view on justice stand on three kinds of justice, (a) the distribution of societal benefits and burdens (distributive justice), (b) the assertion of right to participate

in public decisions (participative justice), and (c) the demand for public acknowledgment and compensation of affected groups (recognition justice). In the same way, environmental justice also stands on these three kinds of justice. Environmental justice (a) seeks for a redistribution of environmental benefits and burdens (same as distributive justice), (b) environmental justice demand access to decision making processes on the environment (same as participative justice) and (c) environmental justice calls for recognition and compensation of environmental affected group (same as recognition justice). Following this line of thought, it is seen that the three justices are tacitly related and connected (Gilbert 2004:245-260; Pulido 1996:142-158; Schlosberg 2003; Salazar and Alper 2011). In the same way, it could be deduced that the mobilization by the environmental organizations against the proposed fracking in the Midlands as examined in this research, is based on these three kinds of justices. Thus, social movement organizations, specifically environmental organizations seek for proper distribution of land and its resources; they demand for participatory processes in decision making on the environment and they call for recognition and compensation of those affected by environmental hazards.

3.6 Conclusion

The three forms of justices examined in this chapter are very important in our society, institutions and in the life of every individual. From the conceptualizations of the three concepts of justices above, it is seen that linking and employing environmental justice, Marx's ideas on justice and social justice to inform this research is very vital and suitable. This is because their relationships explain how, why and what (factors and concerns) drives the environmental social movement organizations to mobilize in order to end the structural injustice, social injustice, environmental and economic inequalities that the proposed hydraulic fracturing will cause on the environment and the people in Midlands, KwaZulu-Natal. The focal point of linking the three justices was to show that the richness of economic justice (Marx's views on justice) is also needed in addressing environmental issues. This is because environmental issues also cause social and economic issues such as exploitation of lands from the poor and inequalities and injustices in the distribution of environmental resources. This chapter captures the explanations of the three types of justices that can be employed by environmental organizations and applied to environmental, social and economic issues.

CHAPTER FOUR: METHODOLOGY

4.1 Introduction

This chapter highlights the research methods and how the samples are selected for the research. The methodology states clearly, the ways in which data are collected and how the data will be analyzed. It also captures the research paradigm and tradition employed in the research. This chapter also briefly states the ethical considerations and how the collected data will be stored. The time period for the data collection process took three (3) months (5th April to 28th June 2017) to be completed due to the busy schedules of the participants in the research.

4.2 Qualitative Research and Interpretivism

The method employed in this chapter is a qualitative research method. It also adopts the interpretive paradigm to gain an in-depth understanding of the phenomenon. Qualitative research method is the use of “words rather than quantification in the collection and analysis of data” (Bryman 2012:380). Using a qualitative research method in the collection of data will help the researcher to understand and describe the environmental organization’s emergence and their mobilizations against the proposed hydraulic fracturing in the Midlands KwaZulu-Natal. Qualitative research method also gives room for the researcher to get subjective experiences of the action and thus, see things through the eyes of the participants (Strydom and Bezuidenhout 2014:173).

The interpretive paradigm entails the understanding of the phenomena through the people’s interpretations in order to will help the researcher appreciate, describe and interpret the experiences of the environmental social movement organizations examined in this research. It will also help the researcher to take into considerations the context of beliefs and values of each organization examined in this research (Du Plooy-Cilliers 2014:27-28). This is because values and beliefs always cloud our interpretations and constructions of the realities around us (Consin 2005; Elliot and Lukes 2008). The use of qualitative research method entails the adherence to the interpretive philosophical paradigm. Hence, qualitative method and interpretive paradigm work simultaneously and they will help the researcher to explore and

analyze how the environmental social movement organizations in this research mobilizes against the proposed hydraulic fracturing in the Midlands.

In a brief capture, the researcher uses a qualitative and interpretative research paradigm to explore and understand how the fifteen environmental social movement organizations carry out their mobilization against fracking in the Midlands. The researcher adopts the qualitative and interpretative paradigm in exploring how these environmental organizations recruit and mobilize its members. It also seeks to understand the factors and concerns that necessitate the rise of the mobilization. The qualitative and interpretive paradigm will also help to explore and describe the strategies employed in the mobilization processes. Through the use of qualitative and interpretive paradigm the research will be able to highlight the sources of funds for the environmental organizations; and finally, this research explores and describes how the organizations work in collaboration with other movements and organizations to advance their mobilization against fracking in the Midlands.

4.3 Sampling Design

This research adopts a non-probability purposive-sampling design in selecting the fifteen environmental social movement organizations from which the participants are drawn. A Purposive sampling method was used because of the common characteristics (active participation and mobilization against fracking in South Africa and in the Midlands) of the environmental social movement organizations. These characteristics are relevant to this research because they help the researcher to choose the environmental organizations (Pascoe 2014:142-143; Welman and Kruger 2001). Purposive sampling method is suitable for this research because participating organizations contribute to key issues identified in this study.

4.3.1 Sample Selection and Size

This research consists of fifteen participants, each drawn from the fifteen different environmental social movement organizations in Pietermaritzburg. The environmental social movement organizations from which the participants are drawn are: Groundwork, FrackfreeSA, Endangered Wildlife Trust, African Conservation Trust, Midlands Conservancies Forum, Concerned Young People of South Africa (CPSA), Mpophomeni Conservation Group, Wildlife and Environment Society of South Africa (WESSA), World Wide Fund(WWF), Midlands Meander Education Project, South African Youth Climate

Change Coalition, Duzi Umgeni Conservation Trust (DUCT), Wilderness Action Group, Happy Earth Environmental Education and Sustainability Forum and Environmental and Rural Solutions. These environmental organizations are Non-governmental Organizations (NGOs) and they are chosen based on their active participation and mobilization against the proposed hydraulic fracturing in South Africa and in the Midlands.

The choosing of the environmental organizations in this study is purposive because prior to this research in January 2017, the researcher met the directors of two of the environmental organizations (FrackFreeSA and African Conservation Trust) in a town hall meeting in Mpophomeni. The meeting was about fracking in the Midlands. The directors gave the researcher the names of some of the effective environmental organizations against the proposed fracking in Midlands. From the lists of the environmental organizations, the researcher purposively selected the ones mentioned above. The fifteen participants were selected from the organizations based on recommendations from the directors of each of the environmental organizations and some of the participants were the directors. The participants were selected based on their participation in the campaign against fracking in the Midlands in their organizations.

From the fifteen participants, nine (9) were women- two (2) blacks and seven (7) white women. Six (6) of the participants were men; two (2) blacks and four (4) white men; among the six men, one was a youth (boy) of 23 years old. Among the participants in this research, eight (8) were directors; three (3) male directors and five (5) female directors. Among the five female directors, two (2) of them were assistant directors in their organizations. The rest of the other seven (7) participants were staff members of the organizations who are head of the campaign against fracking in the Midlands. These statistics help to reveal the involvement of genders and races in environmental issues.

4.4 Interview and data collection procedures

Semi-structured in-depth interviews with open ended questions were used in the interview and data collection process. A semi-structured interview involves the use of guided questions for probing answers thereby exploring and getting an in-depth understanding of experiences, values and beliefs around the mobilization against fracking in the Midlands (Welman and Kruger 2001:161).

During the interview, instruments such as an audio recorder were used to record the responses (data) to the questions from the participants. The audio recorder was used to conduct the one to one interviews; while a telephone was used to conduct a telephonic interview with one of the participants (from Environmental and Rural Solutions) and the computer system was used to send the questionnaires to one of the participants (from Concerned Young People of South Africa) and responses were gathered from the participants. Each interview session was scheduled for a maximum of 50-60 minutes time period. The interviews were conducted in English language. All face-to-face interviews were conducted in an environment that was safe and comfortable for the participants and the researcher and also conducive for interviews. The interviews were conducted in a comfortable study room on the University premises and in a comfortable room on the organization's premises. The participants and the researcher willingly agreed to meet for the interviews at any of the locations for the interview.

Qualitative content analysis was also used in answering the questions, especially on the roles of environmental social movement organizations. The responses (data) from the participants were transcribed manually by retyping the responses word for word so that it can be analyzed. Codes were manually created from the data. The codes were developed inductively from the data in order to help answer the research questions. Coding helped the researcher to organize the data into meaningful themes for analysis in order to show the findings in the study.

4.5 Ethics

Before embarking on the interview for collection of data, after the researcher had identified and selected the fifteen environmental social movement organizations, a gatekeeper's letter was sent to the fifteen environmental organizations via emails. This was followed by phone call and further emails as a reminder in order to get letters of consent from the environmental organizations. The gatekeeper's letter explains the purpose of the research and why their organization was chosen as a sample for the research.

After the researcher had received the ethical clearance letter from the University's Ethical Committee, selected environmental social movement organizations were contacted for interview. Before interviews were conducted, participants were told of the purpose of the

research and each participant was given an informed consent letter to sign in order to show their individual consent.

There were no incentives given to the participants before, during and after the interview. The participants' involvement in the interview was voluntary; thus, there were no coercion and they were not under duress to participate in the research. The anonymity and confidentiality of all participants were ensured such that their names, positions and identities were not linked to their responses during the interviews.

The collected data were safely pass-warded in the audio recorder used for the interview and it will be available to the researcher and the supervisor for this research. The audio recorder containing the data will be kept with the University for the period of five (5) years as recommended by the University research principles.

4.6 Difficulties in Data Collection

The difficulties faced during the interviews and data collection was that one of the participants opted for the questionnaires to be sent via emails and answers will be provided to the questions. This option of data collection was used because the participant for this particular organization (Concerned Young People of South Africa (CPSA)) was busy and could not find time for the one to one interviews as proposed in this research. A reschedule for another date for interview was suggested by the researcher to the participant, but the participant insisted on answering the questionnaires via email. Following ethical considerations of not coercing participants, the questionnaires were sent via email and answers were given. As a result of this, the researcher was not able to probe some of the responses given to some of the questions.

Another difficulty encountered during the data collection is that the participant for one of the environmental organization (Environmental and Rural Solutions) opted for a telephonic interview instead of a one to one interview. This was because the identified participant travelled to another Province for a meeting. The researcher asked for a reschedule of the meeting but the participant insisted for a telephonic interview because of the busy schedule of her work. Thus, a telephonic interview was used for the collection of data with this particular organization. The hindrance in this data collection was that the physical gestures of the

participant were not covered during the telephonic interview and much probing was not done on some questions.

One of the difficulties also encountered was that a particular participant from one of the organizations (WESSA) had a call for another meeting during the interview. Thus, he was rushing when answering the questions and he skipped some of the questions, saying that they were not applicable to his organization. Another difficulty was that WESSA did not have any specific strategy to fracking; their strategy was to share environmental information about fracking on their website. These also hindered the researcher from probing and getting responses for some of the questions. In essence, these difficulties encountered during the data collections are the limitations of this research because much probing and responses could not be gathered from the participants.

4.7 Conclusion

In every research and written work, there must be a method or style of writing that the research or writer adopts. In this research, the qualitative research method was adopted with guided questionnaires to gain an in-depth understanding of the emergence of environmental social movement organizations against the proposed hydraulic fracturing in the Midlands. Some of the methods adopted and explained in this chapter were helpful. However, the limitations encountered during the data collections also hindered some useful information on the mobilizations against fracking by these environmental organizations.

CHAPTER FIVE: DATA ANALYSIS AND FINDINGS

5.1 Introduction

This chapter will present the findings of this research by highlighting and explaining some of the findings using tables and themes that are relevant to the study. It is also important to note that the names used in the analysis and presentations of the findings are pseudonyms-they are not the real names of the participants. The explanations and analysis of data in this chapter are the responses from participants from the fifteen environmental social movement organizations mentioned in the previous chapter. The themes in this chapter were created from the data into meaningful themes to answer the research questions and elaborate on the objectives of the research. The themes will capture discussions on the factors and concerns that motivated the emergence of environmental organizations, the recruitment of people in the society, the strategies employed by the organizations in their campaign against fracking and how they collaborate with each other in the mobilization against fracking. This chapter also captures themes that cover the opportunities and challenges in working together. It further highlights themes that explain the sources and challenges in getting funds and the different positions and views on fracking by the environmental organizations.

5.2 Year of Participation in Fracking Issues

The fifteen environmental organizations examined in this research were asked when they started their mobilizations against fracking in South Africa. Thus, the table below shows the fifteen organizations and the year they started their campaign against fracking issues.

Table 1. Environmental organizations and year of fracking campaign

Environmental Organizations	Year of taking up fracking campaign
Groundwork	2009
Endangered Wildlife Trust	2010
WESSA	2010
DuziUmgeni Conservation Trust (DUCT)	2013
African Conservation Trust	2014
Midlands Conservancies Forum	2014

World Wide Fund (WWF)	2014
Concerned Young People of South Africa	2015
Environmental and Rural Solutions	2015
FrackFreeSA	2015
Happy Earth Environmental Education and Sustainability Forum	2015
Midlands Meander Education Project	2015
Mpophomeni Conservation Group	2015
South African Youth Climate Change Coalition	2015
Wilderness Action Group	2015

Responses from the participants showed that among the fifteen environmental organizations, Groundwork was one of the first environmental organizations in the mobilizations against fracking. Other organizations started coming up in 2010 and a full spring campaign started in 2015. These different years of campaigning against fracking by the environmental organizations, shows how various proposals for fracking emerged (Creamer, 2010; Mathews 2010; De Wit 2011).

5.3 Factors and Concerns that Motivated the Emergence of Environmental Social Movement's Mobilization

There are many reasonable and interesting factors and concerns that show why social movement organizations emerge in the society. Explanations on the theories in chapter three also shows some of the reasons why social movement organizations, especially environmental social movement organizations emerged. This section seeks to explore and understand why environmental organizations emerge to mobilize against the proposed hydraulic fracturing in the Midlands. This section aims to answer the research question on what factors and concerns gave rise to environmental social movement organization's mobilization against the proposed hydraulic fracturing in Midlands KwaZulu-Natal? The reasons for mobilizations will be ticked in the table below for each organization.

Table 2. Factors and Concerns that motivated the emergence of Environmental Social Movement's Mobilization

	Reasons for Mobilization			
Environmental Organizations	Concern for Environmental and Social Justice	Concern for Industrial Pollution	Concern for underground water contamination	Concern for biodiversity and species
Groundwork	√	√		
FrackfreeSA	√		√	
Endangered Wildlife Trust				√
African Conservation Trust				√
Midlands Conservancies Forum			√	√
Wildlife and Environment Society of South Africa (WESSA)			√	√
Midlands Meander Education Project			√	
World Wide Fund (WWF)			√	
South African Youth Climate		√		

Change Coalition				
Duzi Umgeni Conservation Trust (DUCT)			√	
Wilderness Action Group				√
Happy Earth Environmental Education and Sustainability Forum			√	
Environmental and Rural Solutions			√	
Concerned Young People of South Africa	√		√	
Mpophomeni Conservation Group			√	

From table 2 above, the dominant reasons for mobilization by the environmental organizations against fracking in the Midlands is the concern for underground water contamination. To highlight a few quotations from the data; One of the participants, Emmanuel (DUCT, 9th June 2017) noted that his organization stood up against fracking because “we are at the geographically based catchment, the Umgeni catchment and that is one of the area that was targeted first for fracking”. Another participant Ndumiso (Environmental and Rural Solutions, 27th June 2017) added that they mobilized against fracking because they want clean water. The participant explained that, “our interest is making sure that there is

delivery of clean water from this upper Nzumvubu catchment to the other 1 million beneficiaries downstream of where we are”. Zoe (WWF, 19th May 2017) also added that:

It was the potential impact on water resources, because we run fresh water program, that is our sort of chief concern, as well as the impact on agriculture because we work a lot with commercial farmers and then the ramification on livelihood, local communities, all of that but the main focus was on land contamination and water contamination first and foremost.

Another participant, Zama (Mpophomeni Conservation Group, 10th May 2017) also highlights concerns on water contamination when she said that:

The Drakensburg is just above us that is where our water comes from. And the area that is proposed for fracking is within that stressed water area. So the Drakensburg is the head water of our Province and the rest of South Africa, because we do not only supply water to Durban, we also pipe it up to Johannesburg, yeah, it goes that far from the Drakensburg, so the water source cannot be disturbed.

These concerns for water contamination are vivid in the concern for underground water contamination raised against fracking by Mair (2012), Department of Water Affairs and Forestry (2004) and De Wit (2011), in chapter two.

Other organizations raised concern for biodiversity and species in support of De Wit (2011:1-5) when he argued that fracking will destroy the iconic landscape in South Africa. For example, Lucky, (African Conservation Trust, 20th April 2017) pointed out that “we have a big focus on heritage as well and addressing specie lose and biodiversity; so we are a founding member of project Rhino KZN and fracking will affect the survival of species”. Anna (Endangered Wildlife Trust, 13th April 2017) also added that:

Our focus is around protecting threatened species and ecosystem and it very much biodiversity focused and obviously, fracking for us is major concern in terms of not only is it directed to biodiversity but also in terms of the habitat disturbance that comes with fracking. We have published a position statement against fracking.

One of the organizations (Concerned Young People of South Africa) raises concern for the exploitation of land from the poor as what motivated them against fracking in the Midlands. Participants from Concerned Young People of South Africa (Kenneth 26th April 2017) noted that, “the unfairness of taking over people’s land, the land of their ancestors, and the oil companies just push their agenda and do not have a heart or ear for the people. In a democratic country, this is not right; it is not right to exploit the poor in this way”. This

concern for exploitation of land falls under concern for environmental and social justice in table 2 above. It also explains how environmental issues can lead to social and economic issues. This point on the unfair taking of people's land also attests to environmental racism towards black South Africans during the apartheid period as explained in chapter two by McDonald (2002), Cock (2004), Bond (2004), Ballard et al. (2005) and Leonard (2018, 2013). This unfair taking of people's land also supports the points made in chapter three by Agyeman (1978), Capek (1993), Regan (2012) and other authors such as Bolan (1994), Kasperson and Kasperson (2001) and Beltran, Hacker and Begun (2016) that the concept of economic justice (Marx's view on justice) should also be employed by environmental organizations in cases of environmental issues. This concern on the unfair taking of people's land also supports proponents of Marx's view on justice such as Van de Veer (1973), Husami (1980), Stoian (2014) and Stewart and Zaaiman (2015) in their condemnation of exploitation and unfair treatment of labourers by the capitalists. This point also reveals the richness of economic justice (Marxist perspectives) to the environmental issue as expressed in chapter three. It also adds to the relevance of Marx's view on justice as one of the theories employed in this study. From table 2, Groundwork and FrackFreeSA's concerns against fracking are based on environmental, social and economic concerns. Leonard (Groundwork, 26th May 2017) expressed their environmental, economic and social concerns that:

We began to realize that wherever the extractive industries, the mining industries, the oil and gas industries moves into any space, what they do is that they extract the resources that are in that space but they never benefit the people that are nearby, so the nearby communities are never benefited. So, they release a lot of pollutants in terms of gases such as carbon dioxide, sulfurdioxide and nitrous as the main pollutants. Then they also have effluents, liquid effluents, in most cases which they do not handle very well and they then release it into the nearby rivers; so, its pollution on one part in terms of air pollution, ground pollution and water pollution but that apart is that they do not benefit the communities that are around. So, we have got a situation whereby fracking have got a history in America, fracking have got a history in Canada of doing the same thing; where they move in, extract the gas and they live polluted water, polluted land, polluted air and sick communities that come out of that because of all the pollution. So, it's that kind of knowledge that pushed us to emerge to mobilize against fracking and pushing back on fracking.

Vivian (FrackFreeSA, 17th May 2017) also highlighted the social concerns against fracking from her organization by stating that:

We focus on the social issues because we see that mining and extractives have affected the social fabric of communities. Social issues like for example if you go to anywhere there is coal mining, those communities have to deal with health issues from dust, they have to deal with the influx of people coming in to form informal settlements and then the service delivery problems starts and the Municipality cannot cope because they are not getting increase rate or they are not spending where it should be and sudden the community social fabric is destructed.

These quotes re-echoed the unfair economic and social situations that environmental issue generates. Hence, the quotations explained the relationship and the need for the integration of the three forms of justices (environmental justice, Marx's view on justice and social justice) explained in chapter three into environmental issues (Agyeman 1978; Capek 1993; Bolan 1994; Regan 2012; Kasperson and Kasperson 2001 and Beltran, Hacker and Begun 2016).

South African Youth Climate Change Coalition highlighted that they mobilize against fracking because of climate change issues. The participant from the organization, Leboh, (South African Youth Climate Change, 5th June 2017) stated that:

Our organization focuses on effects of climate change and wants to create a system that does not contribute to climate change effects on young people that we have been seeing all over the world and global as well. Therefore, since we are an organization that is concerned about things that affect young people especially environmental issues like climate change issues, fracking became one of our focal main points.

All the above reasons could be deduced to express concerns for environmental justice, social justice and economic justice. This is because most of the reasons why these organizations emerged emanate from environmental issues which in turn cause social and economic issues that affect the society. These quotations and analysis answers the research question on what factors and concerns motivated the emergence of environmental social movement organizations.

5.4 Recruitment of members into Environmental Organizations

The membership of social movement organizations is a vital aspect of every organization. Some organizations require their members to be fully registered while in other organizations, membership is voluntary and informal without registration. Table 3 below summarizes responses to the research question on recruitment.

Table 3. Recruitment of members into environmental social movement organizations

Environmental Organizations	Recruitment Strategies	Recruitment into the Organizations
Groundwork	Sharing of Information through Community education activism	No recruitment into the organizations; members are staff.
FrackFreeSA	Sharing information to the public through social network (twitter, blogs and Facebook)	No recruitment into the organizations; members are staff.
Endangered Wildlife Trust	Sharing information to the public through social network (twitter, blogs and Facebook)	No recruitment into the organizations; members are staff.
African Conservation Trust	Sharing information about fracking through networks and personal relationship with people	No recruitment into the organizations; members are staff.
Midlands Conservancies Forum	Advertising about fracking through Facebook, website, newspaper and Television.	No recruitment into the organizations; members are staff.
Concerned Young People of South Africa	Sharing information about fracking through social media and leaflets.	No recruitment into the organizations; members are staff.
Mpophomeni	Educating people in	No recruitment into

Conservation Group	the rural community on fracking issues	the organizations; members are staff.
WESSA	Educating the public on fracking issues on website	No recruitment into the organizations; members are staff.
Midlands Meander Education Project	Conducting environmental education on fracking issues and the environment in schools	No recruitment into the organizations; members are staff.
World Wide Fund (WWF)	Conducting environmental education and sharing information through social media	No recruitment into the organizations; members are staff.
South African Youth Climate Change Coalition	Conducting environmental education in the university.	Interested persons are recruited and registered as a member of the organization.
DuziUmgeni Conservation Trust (DUCT)	Conducting education on fracking and on the environment	No recruitment into the organizations; members are staff.
Wilderness Action Group	Words of mouth to close friends	No recruitment into the organizations; members are staff.
Happy Earth Environmental Education and Sustainability Forum	Conducting education on fracking and on the environment	No recruitment into the organizations; members are staff.

Environmental and Rural Solutions	Sharing information through social media such as Facebook and website.	No recruitment into the organizations; members are staff.
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Table 3 shows that most organizations employ one or two different recruitment strategies in recruiting members into their organizations. The common recruitment strategy involves the sharing of information through social media such as Facebook, blogs, websites, WhatsApp messenger, television, and radio. On this point, Vivian (FrackFreeSA, 17th May 2017) noted that “we just constantly send messages on Facebook, twitter, emails, WhatsApp and blogs”. This adds to the explanations in chapter two on social movement organizations and the use of modern communication technologies (Oberschall 1973; Wilson and Orum 1976; Snow, Zurcher and Olson 1980; Silk 2004; Jasper and Young 2008; Castells 2012; Cabalin 2014).

Another dominant recruitment strategy is conducting environmental education programmes for communities, the public and youths on university campus. Emmanuel (DUCT, 9th June 2017) highlighted that “we have our education training and development unit at DUCT and we are active around fracking in the school programmes we run”. Leboh (South African Youth Climate Change, 5th June 2017) added that:

We basically run different programs within the University of KwaZulu-Natal (Pietermaritzburg Campus), just like we ran one in first semester called “Break Free” which mean break free from fossil fuels, break free from fracking and break free from all those things that will cause environmental injustices as well. So basically we mobilize young people through having those particular programs and then giving them information and creating a space for them to be able to engage on these issues.

These views on environmental education employed by the organizations also support McCarthy and Wolfson’s (1996) point on the use of education as a strategy by social movement organizations. These views on environmental education, as a strategy for recruiting members, also supports the roles of environmental organizations as explained by Everett (2001) and Brecher (2015) in chapter two.

Two of the organizations (African Conservation Trust and Wilderness Action Group) in table 3 highlighted the use of pre-existing relationships with people as one of the strategies in

recruiting people to join in the mobilization against fracking. Participant from African conservation Trust, Lucky (20th April 2017) highlighted that, “it is all through words of mouth and it is just literally through the networks that we have got. Whether it is social network or personal relationships that I have got but much has been the words of mouth to people I know”. Keshi (Wilderness Action Group, 14th June 2017) added that, “primarily through words of mouth, on a one to one, I engage you, I suggest that you should think about this is another way. It is about talking to the people close to you and people you encounter along the way”.

Table 3 also shows that the environmental organizations already have their staff members; however, only one organization (South African Youth Climate Change) recruits and registers interested people into their organization as staff members. Hence, in the mobilization against fracking in the Midlands, people in the society volunteer to join in protests, attend community meetings and education programmes in order to know more about fracking issues but they are not recruited as staff members into the organizations. The environmental organizations do not recruit members because there is no money to pay new employees’ salaries. One of the participants, Anna (Endangered Wildlife Trust, 13 April 2017) elaborated on this point by stating that, “we have staff members that work in our organization; they are field-based staff. Their role is to work with communities, share the messages, information and updating people on fracking issues and processes; so our staff mobilize people in the community; we do not recruit”. This implies that the people in the society are only needed for mobilizations and other activities of the organizations.

5.5 Strategies Employed by the Environmental Social Movements

The literatures by Boschi (1987), Diani (1992), Saunders (2007) and other authors in chapter two, show that there are many strategies employed by social movement organizations. This part of the data analysis looks at what strategies are employed by environmental social movement organizations to achieve its goals in the mobilization against fracking in the Midlands. Table 4 provides practical explanations to some of the strategies.

Table 4. Strategies employed by the environmental social movements

Environmental Organizations	Strategies in the mobilization against fracking in the Midlands
Groundwork	Public awareness education, legal means, protests, use of media houses: TV and radio stations.
FrackfreeSA	Use of social media for mobilization through Facebook, twitter and WhatsApp, protests, use of legal means (by supporting other organizations with information), and granting of interviews to radio stations.
Endangered Wildlife Trust	Use of radio station to communicate information about fracking to local communities in IsiZulu.
African Conservation Trust	Engagement with political parties and politicians in the communities to vote against fracking, use of protests and writing articles in the newspaper about fracking.
Midlands Conservancies Forum	Use of protests and writing articles in the newspaper.
Concerned Young People of South Africa	Use of protests within the rural communities.
Mpophomeni Conservation Group	Use of protests, conducting environmental education in the communities, use of media such as granting radio interviews and writing articles in the local newspapers in IsiZulu to communicate with the people.
Wildlife and Environment Society of South Africa (WESSA)	Apart from sharing environmental information of the website; no specific strategy against fracking.
Midlands Meander Education Project	Conducting environmental education on fracking to the communities and use of protests.

World Wide Fund (WWF)	Participation in public participation meetings and writing articles about fracking in the newspapers.
South African Youth Climate Change Coalition	Use of protests and conducting environmental education programmes at University of KwaZulu-Natal (Pietermaritzburg Campus).
Duzi Umgeni Conservation Trust (DUCT)	Use of protests and conducting educational programmes on fracking issues.
Wilderness Action Group	Persuading prominent leaders in the community to speak against fracking and conducting environmental education.
Happy Earth Environmental Education and Sustainability Forum	Use of protests and conducting environmental educational programmes.
Environmental and Rural Solutions	Use of protests and sharing information about fracking to the people in the communities.

The most common strategy employed by the environmental organizations is the use of protests (Basu 2010; Barton and Roman 2012; Lee et al. 2015). However, some organizations (Endangered Wildlife Trust, WWF and Wilderness Action Group) did not use protests as one of their strategies in the mobilization against fracking in the Midlands. This could be as a result of the unstructured and violent nature of protests as highlighted in chapter two (Barton and Roman 2012). To highlight on the protest strategy, Anna (Endangered Wildlife Trust, 13th April 2017) explains that:

We have not used any protests strategies; I think we participate in terms of the public participation meetings that have taken place. So as staff we attend those public participation meetings obviously as an information sharing opportunity and we are also fully aware that several of those organizations have had protest actions; but yeah, we haven't necessarily taken that up as a strategy.

Another participant Zoe (WWF, 19th May 2017) also added that, "I will not say we have done a huge amount more than just being active participants in meetings and we have not mobilized for a protest action against fracking in the Midlands". The participant from

Wilderness Action Group, (Keshi, 14th June 2017) also added that, “we have not used protests, not by us directly but the bigger coalition has been involved in protests, you must have seen them in the media. So but we were not directly involved in the protests”.

Another strategy is the use of the media, television, radio and social media networks such as WhatsApp, twitter, Facebook, websites and blogs. One of the participants from one of the organizations, Vivian (FrackFreeSA, 17th May 2017) pointed out that they “speak and do presentations through radio, Television and other forms of media”. This point is vividly expressed under strategies of social movement organization when Cabalin (2014) explained that social movement’s mobilization was aided by using different forms of communication technologies such as social media, to call for protests and expand their activities.

Conducting environmental educational programmes is one of the strategies that was employed by some of the environmental organizations as seen in table 4. For example, Leonard (Groundwork, 26th May 2017) pointed out that, “educational information and education is the common strategies used by the organization. We inform members and the public by bringing information so that people are informed because once they have information, they are better to understand the issues”. Another participant, Keshi (Wilderness Action Group, 14th June 2017) added that “nothing but education; one way we do have our education across is that we do have teacher’s workshop ones a year”. This emphasizes the need for public education as a strategy for social movements as explained in chapter two by McCarthy and Wolfson 1996.

Some of the organizations (African Conservation Trust and Wilderness Action Group) highlighted that they persuade local leaders and politicians to discuss these environmental issues in the parliament; Lucky (African Conservation Trust 20 April 2017) illustrated that, “they engage with certain political parties and we have got a debate in parliament on fracking that has happen already. We are also starting to engage on the local level with various politicians to say if you vote for fracking, you are voting against the people”. In addition, Keshi (Wilderness Action Group, 14th June 2017) explained that “they try to lobby opinion leaders around the fracking process”. This point explains Boschi’s (1987), Sutherland (2013), Bond (2008) and Johnson, Agnone and McCarthy’s (2010:2271) views on how social movement organizations negotiate with state authorities for the greater benefits of the people.

Another interesting finding is that some of the environmental organizations (Endangered Wildlife Trust and Mpophomeni Conservation Group) used the local language (IsiZulu) in communicating with the people about fracking issues. For example, Anna (Endangered Wildlife Trust, 13th April 2017) said that, “I and my colleague on the fracking in KZN Midlands, we have used radio to spread the message in local languages and reaching communities that will be affected by fracking”. Zama (Mpophomeni Conservation Group, 10th May 2017) added that “I have written articles to our local newspapers here in IsiZulu and English”. This is a very strong strategy in understanding social movement organizations, especially organizations that go out for rural community outreach. The use of language by social movement organizations is similar to Freedman’s (2006:57) argument on rhetoric. He highlighted that, “the rhetoric of mobilization and agitation shows that the speaker must have a true grasp of the audience’s beliefs, attitudes and desires before his persuasions can be successful”. Freedman (2006) emphasizes more on good public speaking for social movement organizations; while the finding in this study highlights the use of indigenous or native language by social movement organizations.

Table 4 shows that WESSA does not have any specific strategies against fracking in the Midlands apart from sharing environmental information on their website. A participant from WESSA, Roi (WESSA, 23rd May 2017) noted that, “we do not have any strategies directed against fracking, we do not carry out protest actions. We do not believe that’s helpful from our point of view. We have not been involved in the court cases against fracking”. This point has shed more light on section 5.8 below where the positions and views on fracking among environmental organizations are discussed. This point shows that in as much as social movement organizations, specifically environmental organizations unite and focuses on environmental issues that affect the people, some environmental organizations are indifferent and silent on some issues.

Table 4 also shows that Groundwork organization uses legal means against the proposed fracking in the Midlands. This is noted by Leonard (Groundwork, 26th May 2017) when he said that, “we use legal means in some situations whereby the whole process of extraction or the development of fracking has skipped or over looked a lot of other procedures in the law and in the policy, we sue them (oil companies), we find lawyers and we sue them”. Organizations that do not use legal strategy offers information and support; this is because the use of legal strategy is expensive. Hence, the use of legal means as a strategy is left for strong

financial organizations. One of the participants, Vivian (FrackFreeSA, 17th May 2017) highlighted that “we have no money to take up legal actions, but we support and encourage other organizations that have money to sue the oil companies”. These views support the literatures on the use of legal means by social movement organizations (Barkan 1980; Foweraker 1995:78; Basu 2010; Barton and Roman 2012; Franco, Martinez and Feodorff 2013; Hedden, Moyer and Rettig 2013).

5.6 Collaboration with other Environmental Social Movements Organizations

From the interviews conducted in this research, the fifteen organizations involved in fracking acknowledged the fact that they work and collaborate with each other in the mobilization against fracking. This view supports Saunders’ (2007) and Diani’s (1992) explanations of networking among social movement organizations in chapter two. The organizations work together under a unified umbrella organization called FrackfreeSA that coordinates activities in the mobilization against fracking in the Midlands. For example, Kelly (Midlands Conservancies Forum, 5th April 2017) said that, “there is an umbrella organization playing the role of putting together newsletters, keeping people updated on each of the application processes”.

Zama (Mpophomeni Conservation Group, 10th May 2017) also added that they do “participate in any meetings and mobilizing events organized by FrackfreeSA”. Another participant from FrackFreeSA also noted that in their collaboration, “they do share information and materials with each other organizations on WhatsApp, emails, and Facebook” (Vivian, FrackFreeSA 17th May 2017). The collaboration and working together under an umbrella organization attests to the idea of social movement organization’s collaboration as explained by Naidoo et al. (2001) and Ballard, Habib and Valodia (2006). This point on collaboration also attests to the explanations by Diani (1992) and Saunders (2007) on networking among social movement organizations in chapter two. The collaboration under an umbrella organization (FrackFreeSA) also shows a resemblance to Environmental Justice Network Forum (EJNF) that was setup in 1992 to coordinate the activities of environmental organizations in South Africa (McDonald 2002; Lukey 2002; Cock 2004; Leonard 2018).

This umbrella organization has some informal ground rules that bind the organizations together. One of the participants, Lucky from African Conservation Trust (20 April 2017)

noted that, “the rules and guidelines is essentially a collective position on fracking; that fracking currently in South Africa current political and economic climate is not a good idea and that is generally the fundamental rule that brings everyone together”. Philisiwe from Happy Earth Environmental Education and Sustainability Forum added that the ground rule is that “everyone is encouraged to be active in the area where they have capacity and opportunities or abilities” (Philisiwe, 19th June 2017).

An important point to note on how these environmental social movements collaborate together is that some organizations need the support of other organizations in order to achieve their goals in their mobilization. For example, Leboh from South African Youth Climate Change Coalition (5th June 2017) noted that:

They (other organizations) need us as young people to also be there and contribute because most of the time, most of their programs are short of young people; so as a young organization, other organizations plead with us young people to also join in the mobilizations against fracking because the youths will also be affected.

The collaboration between these environmental social movement organizations is an important finding in this research. This is because, in the article *Environmental Movements, Climate change and Consumption in South Africa*, Death (2014) argued that environmental social movement organizations in South Africa lack a “clearly identifiable, relatively unified and broadly popular environmental movement in the country”. He further argued that the absence of such unified environmental movement is the cause of delays by the government. However, this finding in this research disagrees to an extent with Death’s view of environmental organizations for not being unified to address environmental issues. This is because this section shows that there is a unified environmental umbrella organization in the Midlands that coordinate other environmental organizations and publicize environmental issues especially on fracking issues in the Midlands; thus, Death’s position is not relevant in explaining the current state of environmental social movements in South Africa.

A possible objection to this finding against Death’s view is that some parts of the finding shows that some of the environmental social movements are not of the same view with each other when it comes to fracking. Thus, Death’s view is still relevant in conceptualizing environmental social movements in South Africa.

A simple response to this objection is that the various positions expressed by the fifteen organizations on fracking shows the “uniqueness” of each environmental social movement organization. This is because if they all agree on the same view, there will be no innovative ways of mobilizing and advocating for environmental justice. Although unity give some younger environmental organizations the platform and strength to emerge and participate in the mobilization, a strong unified body as advocated by Death (2014), will limit the innovative and dynamic strategies that younger environmental movements will bring to the space of mobilization. At the same time, being under an umbrella organization will help build strategies and support for new organizations. Thus, the flexibilities expressed in the umbrella organization as identified in this research enhances an innovative and dynamic unity, as it coordinates the activities of environmental organizations in the mobilization against fracking in the Midlands.

5.6.1 Opportunities and challenges of working with other organizations

Collaborations from different organizations bring unity and also offer opportunities and challenges. The environmental organizations also highlighted that collaborations with other organizations bring about innovations, improvements and expansion and future collaboration and networking outside the fracking issues. For example, Leonard from Groundwork organization (26th May 2017) expresses that:

Collaboration creates a space within the organization to create similarities with other organizations that you did not know about; so it is like a network. So you meet other organizations within this fracking and say we have similar goals and a similar vision and this is how outside FrackfreeSA we can be able to carry out other visions that our organizations have together.

This quote from the participant attests to Diani (1992), Saunders (2007), Basu (2010), Barton and Roman (2012) and Lee et al.’s (2015) explanations on network analysis as one of the strategies of social movement organizations.

Other organizations noted that getting information and materials are the opportunities gained from collaborating with other organizations. However, one of the participants, John (Midlands Meander Education Project, 30th May 2017) pointed out that “sometimes too much of information could be the challenge as they could not manage and handle or follow up all information gathered”. In addition to this point, Zoe (WWF, 19th May 2017) highlighted that:

The challenge of communication as a collective is that you can get information fatigue, where there is a huge amount of information that comes through the collective and it is pretty hard for one to keep track of them and also keep a brace in terms of everything that is going on; it is quite a challenge in terms of communicating and acting as a collective.

Apart from sharing information and materials, one of the opportunities expressed by Lucky, a participant from African Conservation Trust is that they also contribute to each other's programs by sharing and paying for expertise to educate and take part in the programs and workshops organized by other organizations. Thus, they share costs with other organizations in the mobilization against fracking. Lucky (African Conservation Trust 20 April 2017) recounted that, "when we organize a workshop on fracking to educate the public in the Midlands area, some organizations pay for the venue, others pay for entertainment and others pay for transportation of people to the venue".

This point shows how deep their collaboration goes in the mobilization against fracking. However, in as much as they all share costs, there is a challenge of conflicts of interests. One of the participants, Keshi (Wilderness Action Group, 14th June 2017) pointed out that:

There are times you begin to have ideological differences from time to time about how you are looking at the same problem, about how you want to approach it differently because you are also representing different interests; so there are conflicts of interests and representation at times.

Another challenge to the collaboration among the organizations is the tension between members of some of the organizations. Some organizations and their members embark on disruptive actions that tend to be violent sometimes. In elaborating this point, one of the participants, Emmanuel recalled that "at one of the meetings, somebody went and put a knife into the tires of someone's vehicle, punctured their vehicle and damage their properties" (Emmanuel, DUCT 9th June 2017). This supports the views noted by Byrne (1997) that some social movements tend to be violent in nature.

One of the participants, Leboh (South African Youth Climate Change Coalition, 5th June) expressed the challenge of lack of resources (finance) to attend meetings and support programs in their collaboration with other organizations. For example, Leboh pointed out that, "some organizations have resources and some do not and at some point there are organizations that will be able to go to all the meetings because of resources while other

cannot attend all the meetings”. This shows the relevance of resource mobilization perspective in understanding social movement organizations (McCarthy and Zald 1973, 1977; Smelser 1963; Stinchcombe 1965:148).

5.7 Sources of funds and challenges in getting funds

For every social movement organization to survive there is a need for enough resources to carry out their mobilization and activities (Ballard, Habib and Valodia 2006). The concern for social movement’s resources was the principle on which resource mobilization as a theory for understanding social movements was developed (McCarthy and Zald 1977). Most organizations as it is shown in the literatures in chapter two have different means of raising funds for their mobilizations and other activities. This section will present the sources of funds and the challenges in getting funds for the mobilization against fracking in the Midlands. This section provides answers to the research question of how do environmental social movements get funds for the mobilization against the proposed fracking in the Midlands.

Table 5. Sources of funds and challenges in getting funds

Environmental Organizations	Sources of funds	Challenges in getting funds
Groundwork	National and international donations and charity from philanthropists.	Economic downturn and lack of interest from some donors.
FrackfreeSA	Funding from other environmental organizations	Economic downturn affecting donors.
Endangered Wildlife Trust	Funding from corporate organizations and international donations.	Stress in convincing corporate organizations for funding and rigorous requirements for proposals for funding.
African Conservation Trust	Individual donations, funding from other environmental organizations.	Lack of interest in fracking issues from potential donors.

Midlands Conservancies Forum	Funding from other environmental organizations.	Economic downturn and rigorous requirements for proposals for funding.
Concerned Young People of South Africa	Individual donations among members.	Members sometimes do not have money.
Mpophomeni Conservation Group	Funding from other environmental organizations, individual donations and funds from national organizations.	Economic downturn and insufficient funds from supportive environmental organizations.
Wildlife and Environment Society of South Africa (WESSA)	Funding from corporate organizations and government.	Economic downturn and choices of projects.
Midlands Meander Education Project	Support from other environmental organizations.	Economic downturn and unwillingness from some organizations and lack of funders.
World Wide Fund (WWF)	Use of existing extra funds from other projects sponsored by government and corporate organizations.	Rigorous requirements for proposals for funding.
South African Youth Climate Change Coalition	Support from other environmental organizations.	Economic downturn
Duzi Umgeni Conservation Trust (DUCT)	Funding from government and corporate organizations.	Economic downturn
Wilderness Action Group	Funds from consultations on environmental management workshop and individual donations.	Rigorous requirements for proposals for funding and competitions among environmental organizations for funding.
Happy Earth Environmental Education and Sustainability	Private donations from philanthropists.	Competitions among environmental organizations

Forum		for funding.
Environmental and Rural Solutions	Private donations from philanthropists and funding from other environmental organizations.	Economic downturn.

The data presented on table 5 shows that some organizations such as WESSA, DUCT, WWF and Endangered Wildlife Trust out of the fifteen environmental organizations get funding from the government and corporate organizations. WWF also acknowledged that there is no direct funding for fracking; thus, they use existing extra funds from other projects sponsored by the government and corporate organizations for their mobilization against fracking. A participant from WESSA, Roi (WESSA, 23rd May 2017) said that, “we get funds from the government to do projects and we get funds from corporate organizations to do projects but not on fracking. So we don’t have any projects on fracking, so we are not mobilizing against fracking but we do see it as a social issue in the Midlands, so we write about it”. The participant from WWF, Zoe (WWF, 19th May 2017) also said that “what we have done is just utilize some existing funding to mobilize against the Midlands fracking issue”. In addition, Anna (Endangered Wildlife Trust, 13th April 2017) also said that “we get funds from corporate organizations to protect habitats for species and threats to habitats include fracking”. From this statement, we can deduce that their funding is for protecting habitats for species and because fracking is a threat to the habitats and species, they use some of the funds for campaign against fracking. These views can be linked to Ballard, Habib and Valodia (2006) as they show how social movement organizations in South Africa relate with the government in the post-apartheid period in order to be effective. This finding on how social movement organizations get funds from corporate organizations and government also attests to Cock (2004) and Leonard (2013) views on how social movement organizations get funding support from corporate organizations.

One of the organizations (Wilderness Action Group) acknowledged that they are consultants on environmental management; so they get funds for the mobilization against fracking from the courses they run. To validate this point from the data, Keshi (Wilderness Action Group, 14th June 2017) said that, “we as an organization get our funding through running courses and consultations around environmental wilderness management. So we have been able to get

funding from those courses and the funds have provided a base to support our organization in the mobilization against fracking”. This shows how some social movement organizations self-fund themselves in order to achieve their aims. This view confirms Vacekova and Svidronova (2014) illustration of self-funding for social movements in chapter two.

Most of the environmental organizations from the data as presented in table 5 pointed out that they do get funds from philanthropist individuals in the society. Leonard (Groundwork, 26th May 2017) explains this point when he said that “locally it is people like individuals that have got money, trust; there are a lot of rich people in this country who have got trust”. In addition, in some of the organizations interviewed, the participants noted that some members contribute from their pockets in order to fund the project. This point explains clearly the views made by some of the authors in chapter two on sources of funds for social movement organizations (Edwards and Hulme 1996; Vidacak 2010; Dreher et al. 2012). To substantiate this point on personal contribution with evidence from the data, Lucky (African Conservation Trust, 20th April 2017) explained this point by highlighting that:

I paid for my hotel, I paid for my transport, I paid for myself, it was a R10,000 contribution from me; ehmm, you know, error, fetching and carry people, maybe giving out a couple of T-shirts, you know, paying for, I paid for the stickers. I personally have contributed out of my own income to the course and many of the individuals are doing just that.

From the fifteen environmental organizations interviewed, Groundwork and Endangered Wildlife Trust acknowledged that they do get funds from international and national environmental organizations. Participant from Groundwork, Leonard (Groundwork, 26th May 2017) said that “we have got international donors like the Swedish Society for Nature Conservation and Global Environmental Funds”. Anna (Endangered Wildlife Trust, 13th April 2017) said that “our funding also comes from international Trust Foundations”. Participant from Mpophomeni Conservation Group, Zama (10th May 2017) also acknowledged that they get funding from national organization. She noted that “we get funds from the N3 Toll Concession (N3TC), money you pay for the toll gate, so that’s where we got the money from”.

Table 5 also shows that some of the environmental organizations receive funding support for their mobilizations from other strong financial environmental organizations This is affirmed by one of the participants, Lucky (African Conservation Trust, 20 April 2017) when he said

that “we have been able to source some funding through WWF and Groundwork was also able to raise some funds for us on the fracking issues”. Another participant, Kelly (Midlands Conservancies Forum, 5th April 2017) added that “we got some funds from Groundwork and that was enough for our mobilization in the Midlands”. This view is also illustrated in Bromley (1985) and Haklai’s (2008) views of how Jewish organizations in America provide funds for Palestine Arab organizations in Israel as explained in chapter two.

Most of the organizations from the data on table 5 noted that the challenge in getting funds is the rigorous requirements for proposal of funding. Leonard (Groundwork, 26th May 2017) noted that, “the funding criteria and the requirements of some of the funding houses are just too stringent and at times you cannot be in the position to actually meet the stringent requirements”. Emmanuel (DUCT, 9th June 2017) added that, “it is the time to write complicated proposals, you know everybody is active we don’t have a dedicated funder so it falls on the CEO or myself or one of the operations managers to write these proposals, sometimes they are not awarded so that’s time lost”. Keshi (Wilderness Action Group, 14th June 2017) also said that, “you have to put together quite complex proposals with a lot of preparations then the people who might provide you with funding require stringent reporting requirements, financial requirements”.

Majority of the environmental organizations noted that the bad economic situations also affect funding from donors; since donors are business men and women who depend on the smooth flow of the economy for their businesses to grow. To highlight a few, one of the participants, Leonard (Groundwork, 26th May 2017) pointed out that the “economic slam that happened in 2008 did affect a lot of NGOs and we lost one or two of some of our funders”. Another participant, Zoe (WWF, 19th May 2017) said that, “the economic situations also affect our fund raising because we have seen some funding been cut back from our current funder here in this office, almost like 50% cut back in budget because of the economy”. John (Midlands Meander Education Project, 30th May 2017) also added that, “as you see we are in economic recession, so a lot of organizations are not willing to give as much as they could have if there is no economic recession. So it depends on the economic state of the country”. Another point expressed on the economic downturn is the exchange rate of the currency Rand to Euro. One of the participants, Leboh (South African Youth Climate Change Coalition, 5th June 2017) gave an example by saying that, “if there is something happening in Europe and 1

Euro is all of a sudden 10 rand that means a decrease. So you get lesser amount of money that you initially applied for which means they affect our operational cost”.

Another challenge to getting funds is that social movement donors sometimes do not have interest in a particular project, such as fracking or environmental related issues; thus, this is a great challenge as they could not get enough funds to carry out that project. One participant, Leonard (Groundwork, 26th May 2017) explained that, “you get to find out that some funders do not find the work of fracking, does not fall under their streams or areas of funding that they want to fund. And you get to find out that at the moment, we don’t have a wide array of people that are actually funding the fracking work as yet”. This point shows the influence of donors on the organization’s activities as argued by Berthelemy (2006) and Dreher et al. (2012) respectively on sources of funds for social movement organizations. Another challenge is the competition for limited funds among organizations. Emmanuel (DUCT, 9th 2017) highlighted that “there is a lot of competition for the same funds so there is no huge amount of funding out there”. Another participant, Philisiwe (Wilderness Action Group, 19th June 2017) added that “the challenge is that there is no huge funding available; so you get many organizations all applying for the same funding”.

5.8 Positions and Views on Fracking

In as much as all the environmental organizations collaborate and mobilize for the protection of the environment and the people, there are cases where some of these environmental organizations differ in their views and positions on the fracking issue. From the interviews conducted among the fifteen organizations, some organizations seem to be silent, indifferent or not vocal as they ought, due to one reason or the other about fracking. When asked if all the organizations share the same views on fracking in the Midlands, it appears to be a tough question for some of the organizations because they do not want to be seen as holding other organizations as scapegoats on fracking issues. However, some organizations responded that they feel some of the other organizations involved in the mobilization are not vocal as they should.

Elaborating on the above concern among social movement organizations, one of the participants, Leonard (Groundwork, 26th May 2017) stated that, “in this mobilization against fracking, some of us (other organizations) are not vocal or making a position statement on fracking because they do not really focus on fracking, because their funding does not cover

fracking”. In addition to this view, Lucky (African Conservation Trust, 20th April 2017) pointed out that, “some organizations have other pressing issues; thus, they do not see the need or the negative impacts of fracking and some organizations can see the bigger picture of the impacts while others cannot”. In this regard, it is seen that the more mobilization against fracking seems to be left for other organizations. This is because some organizations are not vocal and they are not much into fracking. These contrasting positions on fracking in the Midlands also supports the views of Forsyth (2007) when he highlighted the different positions of “Green” and “Red-Green” environmental values in Thailand. These views on fracking by the environmental organizations also demonstrate Hugemark and Roman’s (2007) explanations of the varied positions on social justice between the Swedish Association of the Visually Impaired and the Swedish National Association of the Deaf. These different views by the environmental organizations also attest to Eddy’s (2014) illustration of the different positions held on the principled and pragmatic ideologies of nonviolence by the Christian Peacemakers Teams (CPT) and International Solidarity Movement (ICM) in Israel-Palestine.

Zoe (WWF 19th May 2017) highlighted that another factor why some organizations are silent is because “some of their funders do not want them to use the money they were given for another project such as fracking and other issues”. This means that as an organization, you are limited in your areas of mobilization and seems not to make a position statement because of where your funding is coming from. This point supports Dreher’s et al. (2012) views on the influence social movement funders have on some of the activities, projects and mobilization taken by organization. However, this finding also contrasts Ostrander (1995), Lehmann (1990) and other author’s view when they argued that donors do not influence movement’s activities and ideologies.

Some other organizations also express the view that some organizations are silent and indifferent because they are not fully informed on the knowledge about the issues of fracking and because fracking has not been done in South Africa. In addition, there are also views that the people in the local communities are not informed and educated about the effects of fracking. Thus, some of the local citizens do not share the same views with others and with the environmental organizations. The local citizens think that fracking will only create jobs and development. One of the participants Zama (Mpophomeni Conservation Group, 10th May 2017) elaborated on this point by stating that:

The biggest challenge is that communities tend to get one side of the information from the mining companies coming in and promising jobs and economic opportunities and that is only one side of the coin that communities sees; and of course they will formulate an opinion based on that information received.

In addition to this view, another participant Leonard (Groundwork, 26th May 2017) also expressed the concern that, “some leaders in communities are being deceived and bribed with money by the oil companies and that makes them to be of different views with community members and social movements representing the community”.

These findings from Zama (Mpophomeni Conservation Group, 10th May 2017) and Leonard (Groundwork, 26th May 2017) supports one of the social impacts of fracking, that fracking can instigate controversial and different views among people in communities and environmental organizations in the mobilization; thus, fracturing social cohesion (Klein 2013; Willits, Lulof and Theodori 2013; Morrone, Chadwick and Kruse 2015). These different views on fracking also points to the necessity and importance of educational roles of environmental organizations as highlighted in chapter two.

5.9 Conclusion

Activities of social movement organizations are evident in the society. However, most people do not seem to care or try to understand why these organizations emerge, how they go about their activities and why they have much influence on policies in the society. This chapter has tried to explain social movement organization, especially environmental social movement organizations which are focused on environmental related issues. Environmental social movement organizations can be analyzed and understood from different perspectives. Findings from this research add to the understanding of the emergence environmental social movement organizations against the proposed hydraulic fracturing in the Midlands, KwaZulu-Natal. In doing this, this chapter analyzes and reveals some reasons why (factors and concerns) they emerge, how they recruit members, the strategies employed in advancing their mobilization, and how they get funds in their mobilization against fracking.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

Social movement organizations are important in the society because of their roles. It is permeable for one to question the motives, activities and roles of social movement organizations and environmental social movement organizations in the society. This chapter will capture the key findings in this research, by summarizing the importance of the three justices explained in the study, the strategies employed by the environmental organizations, the sources and challenges in getting funds by the organizations. It will highlight key findings on how the recruit people for mobilization and it will also capture findings on how they collaborate and the opportunities and challenges in their collaboration. It will also highlight the recommendations for further research and the limitations to the study.

6.2 Key Findings

In understanding social movement organizations, environmental organizations in particular, this study also discussed a brief overview of environmental social movement organizations in South Africa. Thus, highlighting how environmental issues were intertwined with social issues and how environmental issues were politicized. It also highlighted the growth of environmental organizations in South Africa and how environmental social movement organizations came together under the Environmental Justice Network Forum (EJNF) to form a united front against environmental racism and industrial pollution in South Africa.

Taylor (2017:1) argued that environmental organizations mobilizing against fracking in South Africa should employ social justice issues, namely, unemployment and underdevelopment against the oil companies. Thus, environmental organizations need to be rooted in and adopt a social justice approach against fracking in South Africa. Taylor (2017:2) highlighted that “if a social justice approach is not taken, then the proponents of fracking will cast the struggle as pro-white, reactionary and anti-development”. This quote illustrates the importance and relevance of adopting social justice as one of the theories that informs this study. It also revealed that environmental organizations should not be confined to the concept of environmental justice in their mobilizations. Taylor (2017) pushes for the adoption of social justice by environmental organizations; however, this research argues and proposes a three

concept approach which entails the adoption of environmental justice, Marx's view on justice (economic justice) and social justice by environmental organizations in their activities and mobilizations against fracking.

The three theories (environmental justice, Karl Marx's view on justice and social justice) aids the understanding of how, why and what drives these environmental organizations into mobilization especially against the proposed fracking in the Midlands. The concept of environmental justice and social justice can be commonly linked or seen as the drivers underneath environmental social movement organizations; thus, applying these two concepts alone to environmentalism ignores economic justice (Marx's view on justice). This is because most times, the fact that environmental issues can also lead to economic issues is not seen; for example, a situation whereby the exploitation and commercialization of environmental resources by few people to the detriments of the larger society, leads to economic injustice and inequality. And some environmental organizations do not see the need to adopt the concept of economic justice into environmental issues. Hence, this study argued for the inclusion of economic justice into environmental issues. In explaining the need for Marx's view on justice (economic justice) into environmental issues, this study was able to identify elements of justice in Karl Marx's criticism of capitalism and linking it to environmental and social justices; thereby exploring and revealing the richness of Marx's thoughts. This study also harnessed the three theories and explained vividly how the theories are connected and how they can be adopted by environmental social movement organizations in their struggle for environmental justice in South Africa. From a sociological background and perspective, this research contributes to the understanding of sociological concepts (environmental justice, Karl Marx's view on justice and social justice) employed as the theoretical frameworks that informs this study. It has also helped to highlight the significance of these sociological concepts by showing that these sociological concepts and other concepts and theories in the field of Sociology are still useful and significant in applying them to the phenomena in modern society. The explanations on the three concepts of justice also answered the research question on what are the factors and concerns that motivated the environmental organizations to campaign against the proposed fracking in the Midlands.

In addition to answer the research question on what factors and concern motivated the environmental organizations to campaign against fracking, findings showed that water concerns is a dominant factor in the mobilization against fracking in the Midlands. This is

because the approval for fracking for shale gas will increase the water crisis in South Africa as most regions in South Africa are experiencing drought and water shortages (Department of Water Affairs and Forestry 2004; Blignaut and Van Heerden 2009:415-420; Nevin 2015). Other findings showed that protection of species, iconic landscapes and industrial pollution are other factors and concerns that motivated their mobilization against fracking.

Another finding in this study reveals the unity among social movement organizations, especially environmental organizations. In their unity, they do not only collaborate with each other, they also form an umbrella organization (FrackFreeSA) that represents their views on fracking. Chapter three highlighted that the activities of environmental organizations in South Africa were coordinated by Environmental Justice Network Forum (EJNF). However, this organization collapsed (Bullard 1994; Khan 2002; McDonald 2002; Cock 2004; Leonard 2013). This finding shows a rebirth of EJNF in the form of FrackFreeSA among the environmental organizations. The revelation of an umbrella organization for social movements adds to the networking analysis of social movements as explained in chapter two by Diani (2002), Saunders (2007), Basu (2010), Barton and Roman (2012) and Lee et al. (2015). In addition, findings showed that they collaborate in sharing information, materials and support each other financially. Their collaboration also brings about expansion and future collaboration among them. However, there are tensions in their collaboration as some members from some of the organizations embark on disruptive actions that tend to be violent. Findings also revealed lack of finance as a challenge to their collaboration. This is because some of the organizations do not have funds to attend meetings and support programmes organized by other organizations. The unity and collaboration among the environmental social movement organizations help to give more answers to the research question on the strategies employed by the environmental organizations in their campaign against fracking.

The data on table 3 showed that the environmental organizations already have their staff member; thus, they do not recruit members. However, only South African Youth Climate Change, as seen in table 3 recruits and register people in the society. In another observation, some of the organizations only mobilize people to gather for mobilization such as protests and they only need people when they want to conduct environmental educational programmes in the communities. This finding revealed that some organizations only need supporters and not staff members to join their organizations. Analysis of the data showed that these organizations do not recruit people in the society as staff members because they do not

have money to pay new staff members. In their campaign against fracking, some of the organizations recruit people in the society for mobilization protests through advertising and sharing of information on television, radio, newspaper, leaflets and social media platforms, such as Facebook, Website and twitter. Other organizations recruit people for mobilization through inter-personal networks and personal relationships with people and friends. Some of the other organizations recruit people for mobilization protest against fracking through conducting environmental educational programmes in the communities. These findings on the recruitment process for mobilization against fracking in the Midlands answered the research question on how the environmental organizations recruit members for the mobilization against fracking.

The sources of funds and the challenges in getting funds for social movement organizations were also another finding in this study. This study revealed that some of the organizations get funds from government and corporate organizations. This finding also showed that despite environmental organizations criticisms of government, they also work together. Other findings also showed that some of the organizations get funding from conducting environmental educational courses, others get funds from philanthropists and some other organizations get funds from international and national environmental organizations, such as the Swedish Society for Nature Conservation, Global Environmental Funds and National N3 Toll Concession. Findings showed that other organizations attested to getting funds from other strong financial environmental organizations. However, some of the organizations highlighted that economic downturn and rigorous requirements for proposal for funding is a challenge to getting funds. Other challenges was that some donors were not interested in the fracking project, there were also the challenge of competition for limited funds by some of the environmental organizations. These findings on the sources of funds for the organizations answered the research questions on how the environmental organizations get funds for their mobilizations against fracking in the Midlands. These findings also adds to the knowledge and importance of resource mobilization theory in understanding social movement organizations as explained by Smelser (1963), McCarthy and Zald (1973, 1977), Cress and Snow (1996) and others in chapter two.

To answer the research question on what are the strategies employed by environmental organizations in achieving their mobilization against fracking in the Midlands, there were some strategies employed in their campaign against fracking. The use of legal means was one

of the strategies adopted by some of the organizations in their mobilizations. This study showed the importance of using legal means by social movement organizations. It also revealed how some organizations were not able to employ legal means because it is expensive; hence, the use of legal means was left for strong financial organizations. Findings in this study also revealed the importance of local or indigenous language by social movement organizations in their mobilizations. Table 4 shows that one of the organizations (Mpophomeni Conservation Group) used the local language (IsiZulu) as one of their strategies in the mobilization against fracking in the Midlands. This finding adds to the strategies employed by social movement organizations. Conducting environmental educational programmes in the communities was also a strategy employed to disseminate information on fracking to the people. Persuasion of politicians and local leaders to discuss issues of fracking in the parliament was also one of the outstanding strategies revealed in this study. Another finding showed that the use of television, radio, and the use of social media are other strategies highlighted from the data. The use of protest actions was also one of the dominant strategies employed by the environmental organizations in this study. However, findings also showed that the use of protests could be dangerous and can hinder the integrity of the organization involved. This is because from the data collected, some members from one of the environmental organization tend to be disruptive which could be seen as violent.

Although findings showed the unity and collaboration among the fifteen environmental organizations, this study also highlighted the different views and positions held by some of the environmental organizations on the fracking issues. These various positions and views did not portray disunity but it showed the uniqueness and interests of different social movement organizations. Findings on the views and positions held by some of the environmental organizations also revealed how sponsors can also influence the interests, views and positions of social movement organizations on societal issues.

6.3 Recommendations for Further Research

In line with the key findings, future research on social movement organizations should explore more into the recruitment of people into the organizations. This is because some social movement organizations only need people as supporters during mobilization and demonstrations. Findings and observations in this research also shows that out of the fifteen environmental organizations examined in this research, only one (South African Youth

Climate Change Coalition) actually mobilized and recruited people from the society into their organization as staff members. The mobilization of people in the society for only protests is also very dangerous to the growth and credibility of social movement organizations. This is because some members engaged in disruptive actions. This could hinder the integrity of the organization in the society. Hence, more studies should be done in exploring more reasons as to how some social movement organizations address disruptive actions by some of her members.

This study also highlighted the use of local language (IsiZulu) in communicating with the people as one of the strategies employed by two of the environmental organizations (Mpophomeni Conservation Group and Endangered Wildlife Trust) in their mobilization as seen in table 4. Hence, this showed the importance of local language as a strategy that can be adopted by social movement organizations. Therefore, further research should explore the use of local language effectively as a strategy for social movement organizations.

Another recommendation for further research into social movement organizations should be related to the amount of influence sponsors or funders have on the organizations. This is derived from the findings in this study which uncovered that some environmental organizations are not able to mobilize against the proposed hydraulic fracturing as they ought to because of the sources of their funds and funders.

From the data, it can be seen that among the environmental organizations, there are conflicts of interests, views and positions. Thus, further research should be done in exploring how the social movement organizations under an umbrella organization like FrackFreeSA resolve issues of interest differences. In addition, further research should be done on how finance is managed in the umbrella organization for social movements.

Further research should be conducted in exploring and understanding more sources of funds for social movement organizations and the influence of sponsors on the activities of social movement organizations.

6.4 Limitations of the Study

The limitation in this study is that much information was not gathered from some of the environmental organizations; hence, this hindered some findings in this study. This is because one of the participants (Ndumiso, Environmental and Rural Solutions, 27th June 2017) opted

for a telephonic interview instead of a one to one interview. Hence, much probing for answers and findings were not achieved. Another participant (Kenneth, Concerned Young People of South Africa, 26th April 2017) also insisted that the questionnaires should be sent via email and answers were provided. This also showed the limitations of this study because some of answers were not satisfactory enough for this study and the responses needed more probing for richer findings. One of the participants (Roi, WESSA, 23rd May 2017) was distracted by a phone call during the interview; hence, he rushed and skipped some of the questions that he felt were not applicable to his organization. In addition, WESSA did not have any specific strategy against fracking, apart from sharing environmental information about fracking on their website. This also hindered more findings for this research. These difficulties in data collection limited this research because much information and probing for in-depth understanding were not received from some of the participants.

Another limitation is that the scope of this research only focuses on the mobilization against fracking in the Midlands by environmental social movements. Thus, the scope of this research is limited because it did not cover mobilizations by other social movement organizations such as political, religious and agricultural farmer's mobilization against fracking in the Midlands. One other limitation of this research is that it did not explore more, on the legal proceedings, and how the issue of fracking has been addressed in the political arena such as the parliament.

Despite the above-mentioned gaps, this study is invaluable to the understanding of social movement organizations, specifically environmental social movement organizations as their purpose is often misconstrued by the society. The study has revealed more insights to the society about the roles and purposes behind the existence of social movement organizations, specifically environmental social movement organizations.

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APPENDICES I: INTERVIEW SCHEDULE

These questions will help the researcher to explore and to have an in-depth understanding of the rise of environmental social movements against the proposed hydraulic fracturing in Midlands, KwaZulu-Natal.

1. When did fracking start in this organisation?

About your organisation:

- What environmental concerns does your organisation focus on? And when did it first began operating?
 - Which other organisations do you work with on the above aspects?
 - How and when did your organisation get involved in the mobilisation against fracking?
2. What factors and concerns motivated your organisation to mobilise against fracking?
 - Can you comment on the social political, economic, legal, environmental or community factors and concerns that motivated your organisation to mobilise against fracking?
 3. Your organisation addresses social issues that affect the people, how is social justice- which concerns people's welfare incorporated in your mobilisation against fracking in the Midlands?
 - Since your organisation is an environmental organisation, how is environmental justice- which involves justice for the environment and the people incorporated in your mobilisation against fracking in the Midlands?
 - Can you say that your mobilisation against fracking is informed by environmental justice and social justice for the environment and the people?
 4. What do you understand by the notion 'mobilisation'?
 - How is this understood by your organisation? On what basis or common area is your mobilisation based - on religion, gender or nature conservation?
 5. How do you recruit new members in the mobilisation against fracking in the Midlands?
 - (a) How do you motivate both old and new members in the mobilisation against fracking in the Midlands?
 - (b) How do you equip new members with adequate knowledge on issues of fracking?
 - (c) Do new members work in your organisation or they are individual volunteers? (If they are volunteers, how do you sustain them in the mobilisation? Do they ask for incentives)?

6. What are the strategies employed in the mobilisation against fracking in the Midlands?
 - (a) Protest actions?
 - (b) Any court cases involved between the environmental movements and Rhino oil and Gas/interested institutions? (Who are the persecutors and defendants)?
 - (c) When court cases are involved, do individual organisations take it up or you all work together on it?
 - (d) Is the media/newspapers publications part of the strategies?
 - (e) Since women are more affected by environmental issues, what are the strategies employed to support women in the mobilisation against fracking in the Midlands?
7. How do your organisation work and collaborate with other environmental movements/organisations in the mobilisation against fracking in the Midlands?
 - (a) If they do not, how do you (as an individual organisation) mobilise against fracking in the Midlands?
 - (b) How do you share information and materials with other movements?
 - (c) Do all the environmental movements that mobilises against fracking in the Midlands have separate meetings outside the one organised by Rhino Oil and Gas?
 - (d) How often do the movements call for general meetings together?
 - (e) Are there any ground rules that guides and binds movements' involvement in the mobilisation against fracking in the Midlands (*what are the rules*).
 - (f) What common strategies are employed by all the environmental movements in the mobilisation against fracking?
 - (g) Is there an umbrella body that oversees the activities of other organisations involved in the mobilisation against fracking in the Midlands?
 - (h) What opportunities and challenges does such broader collaborations produce?
8. Are some environmental movements or communities indifferent or silent in the mobilisation against fracking in the Midlands? (*If No, ask why? If not really, ask the participants to elaborate*)
 - (a) Do you think all the environmental movements involved in the mobilisation against fracking in the Midlands have or share the same ideas on fracking issues (*if yes, elaborate, if no why?*)
9. How do you get funds for the mobilisation against fracking?
 - (a) Are there any government or non-governmental support in the mobilisation against fracking in the Midlands?

- (b) If they do not, how do you get funds to stage a strong mobilisation against a multi-national company)? (*If response on this is not clear, ask if personal/individual contribution is involved*).
 - (c) What are the challenges faced in getting funds?
10. Being involved in the mobilisation against fracking and observing the responses from Rhino oil and Gas and other interested institutions, do you think fracking as a social issue that affects the society will not take place in the Midlands?

APPENDICES II: ETHICAL CLEARANCE LETTER



28 March 2017

Mr Dominic Dummene Lele 215000238
School of Social Sciences
Pietermaritzburg Campus

Dear Mr Lele

Protocol Reference Number: HSS/0178/017M

Project Title: The rise of Environmental Social Movements: A case study of the Mobilization against the proposed Hydraulic Fracturing in the Midlands, KwaZulu-Natal

Full Approval – Expedited Application

In response to your application received 24 February 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

cc Supervisor: Dr Sharmila Rama
cc. Academic Leader Research: Professor Maheshvari Naidu
cc. School Administrator: Ms Nancy Mudau

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/8358/8657 Facsimile: +27 (0) 31 260 4909 Email: ximbao@ukzn.ac.za / svrmaom@ukzn.ac.za / mohupo@ukzn.ac.za

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APPENDICES III: INFORMED CONSENT LETTER



Social Sciences, College of Humanities,
University of KwaZulu-Natal,
Pietermaritzburg Campus,

Dear Participant

INFORMED CONSENT LETTER

My name is Dominic DummeneLele (Student number 215000238). I am a Masters student in the Sociology Programme at the University of KwaZulu-Natal, Pietermaritzburg campus. The topic of my dissertation is *The Rise of Environmental Social Movements: A Case Study of the Mobilization against the proposed Hydraulic Fracturing in the Midlands, KwaZulu-Natal*.

I am interested in exploring the factors and concerns that gave rise to environmental social movements' mobilization against the proposed hydraulic fracturing in the Midlands, KwaZulu-Natal. This research seeks to understand how social movements emerge in response to issues in the society. Your organization is one of my case study. To gather the information, I am interested in asking you some questions.

Please note that:

- Your confidentiality is guaranteed as your inputs will not be attributed to you in person, but reported only as a population member opinion.
- The interview may last for about 1 hour and may be split depending on your preference.
- Any information given by you cannot be used against you, and the collected data will be used for purposes of this research only.
- Data will be stored in secure storage and destroyed after 5 years.

- You have a choice to participate, not participate or stop participating in the research. You will not be penalized for taking such an action.
- The research aims at knowing the challenges of your community relating to resource scarcity, peoples' movement, and effects on peace.
- Your involvement is purely for academic purposes only, and there are no financial benefits involved.
- If you are willing to be interviewed, please indicate (by ticking as applicable) whether or not you are willing to allow the interview to be recorded by the following equipment:

	willing	Not willing
Audio equipment		
Photographic equipment		
Video equipment		

I can be contacted at:

Email: dominicdummene@yahoo.com

Cell: +2783618062

My supervisor is Dr. Sharmla Rama, who is located at the School Social Sciences, Pietermaritzburg campus of the University of KwaZulu-Natal.

Contact details: email: ramas@ukzn.ac.za.

Thank you for your contribution to this research.

DECLARATION

I.....(full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT

DATE

.....

.....

APPENDICES IV: CODES DEVELOPMENT IN THE STUDY

Code 1: Year of Participation in Fracking Issues: This code was developed to show the years each of the environmental social movement organizations examined in this research participated in fracking issues.

Code 2: Factors and Concerns that Motivated the Emergence of Environmental Social Movement's Mobilization: This code was developed to show the factors and concern that motivated the emergence of environmental organizations and why they are mobilizing against fracking in the Midlands. This code was also developed from the data in order to answer one of the research questions.

Code 3: Recruitment of members into Environmental Organizations: This code was developed from the data collected in order to answer the research question of how the environmental organizations recruit and mobilize members to campaign against fracking in the Midlands. This code also gave insights to the strategies the environmental organizations employed.

Code 4: Strategies Employed by the Environmental Social Movements: This code was also developed from the data collected. This code was generated to answer the research question on what are the strategies employed by the organizations towards achieving their fracking campaign. This code explains the strategies employed by the environmental organizations in order to achieve their campaign against fracking in the Midlands.

Code 5: Collaboration with other Environmental Social Movements Organizations: This code was generated from the data to also explain how the environmental organizations collaborate in their mobilizations against fracking. This code also helps to answer the research question on what are the strategies employed by the environmental organizations.

Code 6: Opportunities and challenges of working with other organizations: This code was also created from the data collected. This code was created to explore more on their collaboration (code 5). It was also created to give more answers and explanations to the research question on strategies employed by the environmental organizations in their mobilizations against fracking.

Code 7: Sources of funds and challenges in getting funds: This code was generated from the data in order to answer the research question on what are the sources of funds and challenges in getting funds for the environmental organizations in their mobilization against fracking in the Midlands.

Code 8: Positions and Views on Fracking: This code was developed to also support code 5 above. It was also developed to shed more light on their collaboration and also to show that despite their collaboration, they also have their different views and positions towards fracking that could hinder their unity.

APPENDICES V: GATE KEEPERS LETTERS



groundWork

Environmental justice action

P.O. Box 2375, Pietermaritzburg, 3200, South Africa ● 6 Raven Street, Pietermaritzburg, 3201, South Africa
Tel: +27-33-342 5662 ● Fax: +27-33-342 5665 ● team@groundwork.org.za ● www.groundwork.org.za

Dominic Lele
Department of Sociology
University of Kwa-Zulu Natal
Pietermaritzburg.

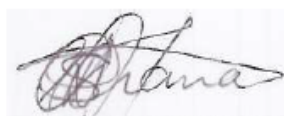
Date: 8th March, 2017

Dear Dominic

We are willing to support and assist you with you project focussing on issues of Social movements, hydraulic fracturing and environmental justice.

We look forward to meeting with you.

Yours sincerely



Samuel Chademana
Climate and Energy Justice Campaign Manager

Trustees: Thuli Makama, Joy Kistnasamy, Farid Esack, Patrick Kulati, Sandile Ndawonde, Richard Lyster, Jon White.

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University Ethics Board
University of KwaZulu-Natal
Pietermaritzburg Campus
South Africa.

22 March 2017

Dear Dominic

Re: CONSENT LETTER FOR MASTERS RESEARCH

WWF-SA hereby gives consent to Dominic Lele (a Masters student in the Sociology Programme at the University of KwaZulu-Natal, Pietermaritzburg campus) to interview a suitable staff member at WWF-SA for the purposes of Dominic's research. We are supportive of his dissertation topic on *"The Rise of Environmental Social Movements: A Case Study of the Mobilization against the proposed Hydraulic Fracturing in the Midlands, KwaZulu-Natal."*

Regards

Susan Viljoen
Water Stewardship Project Manager
Mondi Wetlands Programme, WWF-SA
Suite 1, Hilton Quarry Centre
57 Hilton Ave, Hilton
sviljoen@wwf.org.za



62 Roberts Road
Clarendon
Pietermaritzburg
South Africa 3201

7 March 2017

Mr Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

By email to: dominicdummene@yahoo.com

Dear Dominic

We are willing to support and work with you in relation to your project focussing on issues of social movements, hydraulic fracturing and environmental justice.

We look forward to meeting and working with you.

Yours sincerely

Ilan Lax,
Chairman

DIRECTORS:- ILAX (CHAIRMAN) ● Mrs. S BERRY (DEPUTY CHAIR) ● Dr. WR BAINBRIDGE ● Mrs. R CLARK
WD DENSHAM ● M GANS ● Dr. S KRÜGER ● Mrs I Stewart

*The Wilderness Action Group Registration No. 8602403/08
(Association Incorporated Under Section 21 of the Companies Act)
Non Profit Organisation: No. 042-454-NPO*

Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

Date: 9th March 2017

Dear Dominic

We are willing to support and assist you with your project focussing on issues of Social movements, hydraulic fracturing and environmental justice.

Please remember that we are all volunteers and thus do not have lots of time to assist, but will help where we can.

We look forward to meeting with you.

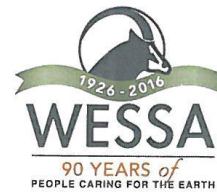
Yours sincerely



Judy Bell
FrackFreeSA



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7 March 2017

Ms Dominic Lele
Department of Sociology
University of KwaZulu-Natal
Pietermaritzburg.
Email: dominicdummene@yahoo.com

Dear Dominic

WESSA is willing to assist you with an interview concerning your research focussing on issues of social movements, hydraulic fracturing and environmental justice. WESSA is concerned about the known and potential environmental and community impacts of fracking in South Africa.

I will be available towards the end of next week for a telephonic or Skype interview (mornings are best for Skype).

Yours sincerely

Morgan Griffiths
Environmental Governance Programme Manager
Cellphone: 072 417-5793
Email: morgan@wessaep.co.za

WILDLIFE AND ENVIRONMENT SOCIETY OF SOUTH AFRICA

Reg No. 1933/004658/08 (Non-Profit Company)

Registration Number in Terms of the Non-Profit Organisations Act 1997: 000-716NPO Tax Exemption Number: 18/11/13/1903

DIRECTORS: Messrs: Dr RG Lewis (Chairman), Dr JT Burger (Chief Executive Officer), Dr P Bartels, J Carstens, J De Bie, K Duncan, L Eiser, Dr H Hendricks (Vice Chairman), Prof M Kidd, A Steyn. Mesdames: Dr J Gon, L Naidoo, M Nyathikazi

Midlands Meander Education Project
P.O Box 6039
Howick
3290, KZN
South Africa
NPO No: 173-925

Tel: 033 330 7260



Date: 7 March 2017

Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

Dear Dominic

We are willing to meet with you and talk about your project which focuses on issues of social movements, hydraulic fracturing and environmental justice. Please contact us to set up an appointment.

We look forward to meeting with you.

Yours Sincerely

A small, square image showing a handwritten signature in black ink on a light background. The signature appears to be "Jessica Gird".

Jessica Gird
MMEP Co-ordinator
0828020005
info@mmeep.co.za

www.mmeep.co.za Face book page: Midlands Meander Education Project
<https://www.youtube.com/watch?v=4miTCNCpiW8&feature=youtu.be>



PO Box 998 HOWICK 3290

24 April 2017

Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

Dear Dominic

We, as the Midlands Conservancies Forum, are willing to support and assist you with your project focussing on issues of Social movements, hydraulic fracturing and environmental justice.

We look forward to meeting with you.

Yours sincerely

A handwritten signature in black ink, appearing to read "S. Allan". The signature is stylized and includes a long horizontal flourish at the end.

Sarah Allan
Vice-Chair



Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

Date: 22 March 2017

Dear Dominic

We are willing to support and assist you with your project focussing on issues of Social movements, hydraulic fracturing and environmental justice.

We look forward to meeting with you.

Yours sincerely,

Ms Tanya Smith
Southern Africa Regional Manager
The EWT's African Crane Conservation Programme

Physical Address: Building K2, Ardeer Road, Pinelands Office Park,
Modderfontein 1609, Gauteng, South Africa
Postal Address: Private Bag X 11, Modderfontein 1645, Gauteng, South Africa
Tel: +27 (0) 11 372 3600 **Fax:** +27 (0) 11 608 4682 **E-mail:** ewt@ewt.org.za **Web:** www.ewt.org.za

The Endangered Wildlife Trust is a non-profit, public benefit organisation dedicated to conserving species and ecosystems in southern Africa to the benefit of all people.

NPO Number: 015-502, **PBO number:** 930 001 777, **Member of IUCN** - The International Union for Conservation of Nature
The Endangered Wildlife Trust is US 501(c)(3) compliant under **US IRS Registration number:** EMP98-0586801.



Pietermaritzburg

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Campsdrift
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Tel:033-3457571
e-mail:info@duct.org.za
website:www.duct.org.za

DUCT is a Non-Profit Organisation
Registration number: 2006/006370/08
NPO registration number: 052428
PBO exemption number: 930027679

Dedicated to environmental health of the uMsunduzi and uMngeni Rivers

Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

Date: 7.3.2017

Dear Dominic

We are willing to support and assist you with you project focussing on issues of Social movements, hydraulic fracturing and environmental justice.

We look forward to meeting with you.

Yours sincerely

Pandora Long

Patrons • Inkosi Bhengu • Zibuse Mlaba • Prof. Charles Breen • Cameron MacKenzie
Directors • David Still • Colin Everson • Trevor Gorven • Mark Graham • Liz Taylor • Sandile Ndawonde • Kirsten Oliver
• Francois Talbot



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South Africa
sayccc@secretary.net
+27 84 045 5243

Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.
19 March 2017

Dear Dominic

As the South African Youth Climate Change Coalition would be honoured to support and assist you with your project focusing on issues of Social movements, hydraulic fracturing and environmental justice. As we believe such researches will assist us and our communities at large.

We look forward to further engagements.

Kind regards

Phiwayinkosi Mungwe
SAYCCC Director
Sayccc_pres@greenmail.net
+27 84 045 5243
www.saycccpress7.wordpress.com
www.saycc.yolasite.com

Executive Board Members: Phiwayinkosi Mungwe (Director); Noluthando Nzimande (President); Vumboni Msimango (Deputy President); SimangeleMsweli (Finance); NcobileNkosi (Secretary); MoeketsiNtsala (Projects and Networking); Caleena De Cavarlho (Media and Publicity)

AFRICAN CONSERVATION TRUST

Conservation ~ Education ~ Innovation

Trust No: IT 2174/00 NPO No: 030-243 PBO No: 930014758 IUCN No: NG/25190



Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

Friday 15th March 2017

Dear Dominic

We were impressed by your knowledge and understanding of environmental justices. We are very keen to assist you with you project focussing on issues of hydraulic fracturing and environmental justice.

We look forward to meeting with you.

Yours sincerely

Francois du Toit
CEO
082 852 6466

Tel: (+27) 033-326 1021 **Fax:** (+27) 086-511 7594
Physical: 46 Pope Ellis Drive, Ashburton, South Africa
Postal: P.O. Box 310, Link Hills, 3652, South Africa
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Trustees: C.H. Grossmann (Chairman), L.O. van Schalkwyk, O.M.E Mthimkhulu, S.R.Francis **CEO:** S.F.du Toit



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++ 27 (0) 39 737- 4849 (phone) 737- 4892 (fax)
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082 953 4857 or 082 782 6067
www.enviros.co.za

"Successfully linking the sustainable development of rural communities and their resource base with the positive aspects of what the 21st century demands and has to offer"

22 March 2017

Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

Dear Dominic

We are willing to support and assist you with you project focusing on issues of Social movements, hydraulic fracturing and environmental justice.

We look forward to meeting with you.

Yours sincerely

A handwritten signature in black ink, appearing to read "Sissie Matela".

Sissie Matela

Members:

L.R.S. Matela (M.Sc Agronomy and Soil Science) & N. McLeod (B.Sc Hons. Environmental and Geographical Science)

- 032-481-5742
- mail@cypsa.org.za
 - P.O. Box 2643, Stanger, 4450



Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

Date: 21/02/2017

Dear Dominic

We are willing to support and assist you with your project focussing on issues of Social movements, hydraulic fracturing and environmental justice.

We look forward to meeting with you.

Yours sincerely



Miss E. Fleischmann
CYP SA: Secretary

The Chairperson
Pandora Long
Cell 072 6928124
Fax 086 6070828

The Secretary/Coordinator
Happy Earth Festival
Dr Friederike Voigt
Cell: 082 7796766
Email: happyearthforum@gmail.com

The Treasurer
Samantha Govender
Tel: 076 655 7081



P.O. Box 20056
Ashburton 3213
KwaZulu-Natal
South Africa

HAPPY EARTH ENVIRONMENTAL EDUCATION & SUSTAINABILITY FORUM

Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

24 February 2017

Re: Research Study Letter of Consent

Dear Dominic,

We are willing to support and assist you with your project focussing on issues of Social movements, hydraulic fracturing and environmental justice.

We look forward to meeting with you.

Yours sincerely

Pandora Long
Chairperson
Happy Earth Forum

Steering Committee Members:

Chairperson: Pandora Long (DUCT/PMMBT P.E.A.C.E. Project) - Vice-chair person: Viranna Frank (KZN Museum) Treasurer: Samantha Govender (MIDI), Project Director: Friederike Voigt (PMMBT P.E.A.C.E. Project) – Executive Members: Yvette Taylor (The Lawrence Anthony Earth Organisation) Mbuso Zondi (SANBI) - Morag Peden - Sibongile Zimu (*S'fundimveloEKZNWildlife)Lethu Mahlaba (DUCT)

1



Dominic Lele
Department of Sociology
University of KwaZulu Natal
Pietermaritzburg.

Date: 7 February 2017

Dear Dominic

We are willing to support and assist you with you project focussing on issues of Social movements, hydraulic fracturing and environmental justice.

We look forward to meeting with you.

Yours sincerely

Penelope Malinga
Environmental Education Facilitator