

https://dspace.org/

South African labour's responses to the challenges of green jobs: a case study of COSATU and NUMSA

Manjawira, Zione Ruth

2016
http://hdl.handle.net/10539/19629

Downloaded from a DSpace repository. https://dspace.org/

University of the Witwatersrand

Faculty of Humanities

Department of Sociology/ Global Labour University



South African Labour's Responses to the Challenges of Green Jobs: A case Study of COSATU and NUMSA

A research report submitted to the Faculty of Humanities: University of the Witwatersrand in partial fulfilment of the requirements for the degree of Master of Arts in Social Sciences

Student: Zione Ruth Manjawira

Student No.: 697738

Supervisor: Professor Devan Pillay

Table of Contents

Declaration 8

Abstract 9

Acknowledgements 10

List of Abbreviations 11

Chapter 1: Introduction 15

1.1 Background and Context 15

1.2 Problem Statement 17

1.3 Rationale 19

1.4 Aims and Objectives 22

1.4.1 Main Objectives 22

1.4.2 Specific Objectives 23

1.5 Limitations of the Study 24

1.6 Subsequent Chapters of the Report 25

1.7 Summary of the Chapter 26

Chapter 2: Literature Review 27

2.1 Introduction 27

2.2 Theoretical and Conceptual Framework 27

2.2.1 Capitalism 27

2.2.2. Ecological Crisis 31

2.2.4.1. Unionism 44

2.2.5. Combining Environmental and Labour Studies 48

2.2.6. Key Concept of the Study: Green Economy 51
2.3 Relevant Literature reviewed 52
2.3.1 Global Responses to Climate Change 52
2.3.2. International Labour Movement's Response to Climate Change 53
2.3.3. Climate Change Responses by South African Government 55
2.4. Trade Unions and Green Jobs in South Africa 61
2.4.1. Trade Unions and Green Jobs in South Africa 65
2.4.2. A Just Transition to a Low-Carbon and Climate Change Resilient Economy 68
2.5. Trade Unions' Political and Social Alliances 70
2.6. Summary 71
Chapter 3: Methodology 73
3.1 Introduction 73
3.2 The Research Approach 73
3.3 Population size and Sampling Techniques 74
3.4 Data Collection Methods 75
3.4.1 In-depth Interviews 75
3.4.2 Documentary Analysis 79
3.4.3 Participatory Observation 80
3.4 Data Analysis 81
3.5 Access and Ethics 82
3.6 External Validity 85

3.7 Summary 85

Chapter 4: History of COSATU and NUMSA 87

4.1 Introduction 87

4.2. The Rise of Unionism in South Africa 87

4.3 The First Trade Unions in South Africa 88

4.4 Unions and Politics in South Africa 92

4.5. The History of COSATU 94

4.6 Legacy and Structure of NUMSA 96

4.7. NUMSA'S Ideologies and Tactics 97

4.8. Strategic Decisions that have shaped NUMSA 99

4.9 Summary 105

Chapter 5. South African Labour's Responses to the issues of Green Jobs: The Case Study of COSATU and NUMSA 106

5.1 Introduction 106

5.2 COSATU's Understanding of Green Jobs concept 106

5.2.1 The Impact of Climate Change on Workers and Communities 112

5.3 COSATU's Responses to Green Jobs 116

5.3.1. COSATU's other initiatives made so far 117

5.3.2 COSATU's Education Programs on Climate Change as part of the initiatives 121

5.4. COSATU's engagement with Government on Climate Change issues 124

5.4.1 Is Labour aligning its environmental responses with Government Policies? 130
5.5. Social Alliances with the environmentalists on Climate Change 133
5.6. Political, financial and social constraints that the trade unions face in implementing the green jobs strategies 136
5.6.1. Constraints faced during policy making processes 136
5.6.2 Constraints to do with Job Growth and Renewable Energy Projects 139
5.6.3 Constraints concerning Trade Union's Political Alliances 140
5.6.4 COSATU's financial challenges that impact the implementation of the green jobs initiative. 144
5.6.5 COSATU's social constraints in implementing green jobs initiatives 148
5.7. How is COSATU responding to these constraints? 149
5.8. How is COSATU leadership supporting the green jobs initiatives 152
5.9. Responses of the Affiliate to green jobs - National Union of Metal Workers in South Africa (NUMSA) 156
5.9.1. Understanding of the Green Jobs Concept 156
5.9.2 NUMSA's Socially Owned Renewable Energy Initiatives 157
5.9.3 NUMSA'S Response to green jobs 158
5.9.4. NUMSA Research and Development Group 162
5.9.5. NUMSA Responses to Government Policies 163
5.9.6. External Views and criticism on NUMSA's response to the Green Jobs Initiative 164
5.10 Critical appraisal of COSATU and NUMSA's approach to green jobs 166
5.11. Summary 168
6.1 Conclusions 170

6.2 Recommendations 174

6.3 Issues for Further Study 175

List of Respondents 177

List of Documents Reviewed 178

Bibliography 180

List of tables

Table 1: Summary of Interviews (page 76)

Table 2: Project Management in Months (page 83)

Table 3: List of Participants (page 174)

Declaration

I, Ruth Zione Manjawira, declare that this research report is my own original work. It is submitted in partial fulfilment of the requirements for the degree of Master of Arts in Social Sciences in the field of Labour Policy and Globalisation at University of the Witwatersrand in Johannesburg, South Africa. It has not been submitted before for any degree or examination to this or any other university.

Date: December 2014

Abstract

Recently, the effect that climate change has on workers has become an important issue in environmental labour studies. The labour movement in South Africa has begun to show interest in responding to climate change and green jobs having realized the threat to health, jobs, livelihood and survival that climate change has on the working class and the ecological environment.

This study aimed at investigating trade unions' response to the issue of green jobs. It focused on the responses by COSATU and its affiliate NUMSA, through a case study on how NUMSA is responding to its SORE initiatives and the challenges labour movements in general are facing in implementing their initiatives. It used in-depth interviews as the main tool for collecting data and thematic content analysis based on the themes identified during the study. Interviewees were identified using purposive sampling from the trade unions, environmentalists, the academia and government departments that closely deal with climate issues.

The study revealed that trade unions have slowly started responding to the issues of green jobs despite huge gaps in their strategies. Although labour is currently working with environmentalists and the academia, it seldom has fruitful engagement with government and seems yet to align its responses with those stipulated in government policies. Labour also faces political, social and economic constraints in its quest to respond effectively to the issues of green jobs. However, affiliates like NUMSA have begun to take some meaningful measures although these are still at infancy stage. These gaps could be attributed to the fact that the issue of climate change is new to the labour movement and that currently it is not seen as a priority unlike the traditional bread and butter issues. On the overall, it seems a lot has been said but little has been done by both the federation and the affiliates.

Acknowledgements

Firstly, I would like to acknowledge my Supervisor, Professor Devan Pillay for expertly guiding me throughout the research writing process and Labour and Development coursework. I definitely would not have made it this good without his expertise, rich information and patience. Your constant encouragement and insightful comments all of which have made this report a better product. I am forever grateful and may God richly bless him.

Many thanks go to National Union of Metalworkers of South Africa officials and shop-stewards for allowing me to use their data, experience and for their cooperation during data collection for my research. I also extend my gratitude to all my respondents for giving me their time to answer my questions.

I am also grateful to the Global Labour University – Wits team for allowing me to undertake this lifetime opportunity. Even when all seemed lost after my health attack in 2012, they still gave me a second chance! This is a spirit of socialism and solidarity.

I cannot forget to thank Lo-Norway through MCTU for their financial support and my employer, Standard Bank for allowing me to attend this program especially my manager who believed in my ability to make it.

To all my relatives, A. Msosa, Dr M. Jana, P. Chinguwo, L. Jere, Jan Paul Magwaya and all my God fathers. I salute you all for the spiritual and moral support you rendered during my studies. Making it wouldn't have been easy and worth it without you all.

Lastly, I salute you all and my promise to you is that I shall use my knowledge to the service of humanity. All this would not have been possible if the Lord had not been by my side: What shall I render but to say thank you Lord!

List of Abbreviations

ANC	Africa National Congress
CEC	Central Executive Committee
CNETU	Council for Non-European Trade Unions
COSATU	Congress of South Africa Trade Unions
COP	Committee of Parties
DEA	Department of Environmental Affairs
DoE	Department of Energy
DTI	Department of Trade and Industry
EU	European Union
ITUC	European Trade Union Confederation
EUTI	European Union Training Institute
FOSATU	Federation of South Africa Trade Unions
GAWU	General and Allied Workers Union
GER	Green Economy Report
GEAR	Growth Employment and Redistribution
GGND	Global Green New Deal
GLU	Global Labour University

GURN	Global Union Research Network
ICEM	International Conference on Energy and Management
ICU	Industrial and Commercial Workers Union
ILO	International Labour Organisation
IMF	International Metalworkers Federation
IPPPP	Independent Power Producers Procurement Programme
IPAP	Industrial Policy Action Plan
ITF	International Transport Workers Federation
ITUC	International Trade Unions Confederation
MAWU	Metal and Allied Workers Union
MICWU	Moto Industry Combined Workers Union
NAAWU	National Automobile and Allied Workers Union
NALEDI	National Labour and Economic Development Institute
NDP	National Development Plan
NCCEC	National Climate Change and Environment Committee
NEC	National Executive Committee
NEDLAC	National Economic Development and Labour Council

NGP	National Growth Path
NGO	Non-Governmental Organisation
NUMARWOSA	National Union of Motor Assembly and Rubber Workers of South Africa
NUMSA	National Union of Metalworkers in South Africa
UDF	United Democratic Front
UMMAWOSA	United Metal Mining and Allied Workers of South Africa
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
OATUU	Organisation of African Trade Union Unity
OECD	Organisation of Economic and Cooperation for Development
REIPPPP	Renewable Energy Independent Power Production Procurement Program
RDP	Reconstruction and Development Program
SAAWU	South African Allied Workers Union
SACP	South Africa Communist Party
SACTU	South Africa Congress of Trade Unions
SAGEM	South Africa Green Economy Modeling
SETA	Skills Education Training Authority

SMU	Social Movement Unionism
SORE	Socially Owned Renewable Energy
TGWU	Transport and General Workers Union
TNC	Trans-National Corporations
UN	United Nations
UNEP	United Nations Environment Program
WFTU	World Federation of Trade Unions

Chapter 1: Introduction

This chapter outlines the background and context of trade unions' responses to climate change and green jobs initiatives in South Africa. It articulates the problem statement by highlighting how climate change has affected workers and explains the rationale for the study. The chapter also spells out aims and objectives of the study.

1.1 Background and Context

'*Climate change increasingly impacts production industries… Research todate has largely ignored the effects of climate change policies on workers and trade union policies… what effect will moving to green production have on workers? How can unions influence processes of re-skilling, avoiding redundancies? …. How can unions reconcile the protection of jobs and protection of environment?...there is need for red-green alliances and for exploration of 'just transition' and 'green jobs' policies*" T Jackson (2012 foreword)

Since 2009, the labour movements in South Africa have been showing interest in the issue of climate change. This is in recognition of the threat to health, jobs, livelihood and survival that climate change poses among the working class and the ecological environment. This interest has caused the trade unions to start a journey to what is claimed a "Just Transition" to a low carbon and climate-resilient economy which puts the needs of working and poor people first in social and economic changes ahead. The climate change challenge which South Africa is facing is linked to the unemployment, poverty, inequality, food and environmental crises which are centralized in economic crisis of capitalism (COSATU 2011).

Even though the 'Just Transition' principle – a framework for fair and sustainable shift to a low carbon economy was championed by unions and supported by NGOs, there are constraints to its

attainment if "business as usual" continues (Foster and Magdoff, 2011). This research has identified political, economic and social constraints which unions face in achieving the 'Just Transition'.

In 2009, the International Trade Union Confederation (ITUC) commissioned a study which concluded that there was need to create decent green jobs, transform and improve the traditional ones and include democracy and social justice in all decision making processes. The study explored whether unions had the capacity to bring hope for sustaining decent jobs and welfare for all and how deeply the unions were committed to green jobs initiatives.

It is for this reason that the Congress of South Africa Trade Unions (COSATU) played an important role in collaboration with ITUC to advance its position and make gains for the working class. As a result, in 2009 COSATU adopted a 15 principle climate change policy framework, signed a Green Accord with its social partners in 2011, and endorsed a resolution that was passed at the 2nd Trade Union Assembly on Labour and Environment in 2011 (COSATU 2011).

In addition, the National Union of Metalworkers in South Africa (NUMSA), one of the biggest affiliates of COSATU with over 300,000 members, majority of whom are semi-skilled, started programs of education and action towards what is called 'Socially Owned Renewable Energy' projects which started later in 2012. They too instituted a study on climate change which endeavoured to determine unions' strategies on paradigm shift towards green jobs. The study determined whether NUMSA was using a minimalist approach which emphasizes on shallow green jobs and social protection with the aim of retaining the jobs of vulnerable workers, or a transformative approach involving new ways of production and consumption to achieve both

decent and green jobs (Cock 2011). The focus was on whether the union could support low growth economy and shift from a high growth economy based on fossil-fuels which is unsustainable.

1.2 Problem Statement

Despite international efforts through summits such as the Brundtland Commission on environment and development in 1983, the Rio Summit in 1992, the 1997 Kyoto Protocol on climate change, the 2002 UN World summit on sustainable development in Johannesburg and the December 2011 Conference of the Parties 17 (COP 17) in Durban, the pace of ecological damage is increasing instead of decreasing. Pillay (2011) observes that in spite of all the talks, little action is taken and he notes that the only observable change is a partial restoration of the ozone layer through the banning of ozone depleting substances in refrigerators and aerosols. He also expresses scepticism that rich countries, who are the main culprits in environmental degradation, will agree to actions towards controlling or stopping what he calls 'the impending disaster'. Similarly, Foster (2001) reiterates that with the United States as one of major greenhouse emitters in the world refusing to sign, the Kyoto Protocol is doomed to failure.

Obviously, the transition to a low carbon economy has massive implications for workers. No wonder that within the union, there is fear that shifting to green jobs will "threaten jobs" (Cock 2007). This research explores interventions within unions with the aim of bringing awareness of environmental protection to workers who may be reluctant to participate for fear of losing their jobs. Cock (2007) writes on the need for unions to fully comprehend this 'just transition' so that it does not become 'green capitalism' which would turn the climate change crisis into a channel of profit accumulation. This research explores how COSATU and NUMSA are ensuring that

green jobs emerges through a green economy based on rights, sustainable development and accomplishing decent work (Cock, 2011 in Sustainlabour 2011).

However within capitalism, not much is talked about regarding the impact of climate change on social and economic issues (Foster 2008). Yet when we talk about climate change, we cannot side-line social and environmental systems. To do this is to neglect the elephant in the living room (Foster 2008). Efforts to 'green wash' environmental challenges and subordinate 'sustainable development' towards economic growth are becoming dominant factors both to global and national discourse and action. There are still some grey areas in the way capitalists are addressing the climate change issue and Pillay (2011) poses a questions as to whether 'green capitalism' will address the needs of society and preserve the environment or lead to increase in inequality where the rich become richer and the poor become poorer. He asks, "Will capital continue to enjoy a huge share of limited resources while the majority of society wallows in deep polluted poverty?" (Pillay, 2011:278)

While there seem to be some efforts to deal with the issue of climate change worldwide, the developing countries show reluctance to move out of rapid fossil fuel-based production. They demand that developed nations should commit themselves to transform their economies and compensate them adequately. However, a few countries like Bolivia and Ecuador are prepared to comply with a move towards a more balanced, holistic, sustainable human development path (Pillay, 2011). This is also observed in this paper on the South Africa's labour unions which are moving towards the green jobs, even though they are faced with challenges as articulated in this paper.

1.3 Rationale

According to Foster, the issue of ecological change will have a chance to forge together with more diverse issues. The struggle for welfare among the mass of the population is now broadening its scope from economic issues and includes a holistic environmental approach to become an environmental justice issue. Struggle for social justice is now uniting with environmental justice and Foster believes this is where hopes for twenty first century rest (Foster, 2001: 40-41). For labour movements in South Africa to survive in this social struggle, there is need to understand the green economy and also comprehend the content of the 'Just Transition'. Bringing awareness to its membership and sensitizing them of the changes that will be brought about due to climate change is a prerequisite for unions' survival.

Cock concluded that the minimal participation of trade unions in the 2004 Vaal struggle despite the fact that workers are first victims in pollution and exposure to dangerous working conditions reflects failure to acknowledge the implications of the climate crisis. It shows denial of resource constraints on economic development (Cock, 2007:37). Even COSATU was not part of the national organization support of the Vaal Environmental Justice Alliance (VEJA) and during its 9th annual congress in 2006; there was no mention of environmental crisis in their political discussion documents. The 2006 COSATU shop stewards training manual only talks about social justice and nothing was written on environmental justice. In 2006, labour unions met in Johannesburg and agreed to strengthen understanding of the link between labour, poverty and environment, training of leaders and workers as a political strategy. They also agreed to conduct awareness campaigns among their members on the need for managing resources by promoting sustainable production and consumption patterns (Cock 2007). During the 2009 COSATU congress, it was declared that the union realizes the reality of climate change and that it must be

confronted. The congress only called on the world to act and reduce emissions while finding new sources of renewable energy and production yet it did not clearly state how it would be involved. It is interesting to note that COSATU's 2015 plan adopted in 2003 as well as its social economic policy does not say anything about green jobs. However, in 2011, COSATU after a long time adopted a policy framework on climate change and NUMSA has embarked on 'build a socially owned renewable energy sector' campaign which aims at addressing the issue of green jobs directly. Investigations through this research have revealed whether this is being achieved on the ground or not. The study also shows if unions are accepting the fact that we are in an era of which Cock calls 'ecological collapse' (Cock, 2007:49).

The research adds on what other unions have started doing in responding to the issue of green jobs and shows social and political conflicts and constraints within the union that may affect jobs and membership retention. Realizing also that climate change and capitalism have a huge impact on humans and the environment, the research conducted along these lines has offered invaluable solutions. Although much research has been done on climate change and capitalism, little is known on unions' involvement in these areas especially on green jobs. Research on 'How COSATU and NUMSA are responding to challenges of the issue of the green jobs' will contribute to:-

1. Widening of the scope of knowledge of strategies by unions' involvement in green jobs through the deepening of the Literature on green jobs which unions and other stakeholders can use as this is a recent study area and not much has been written on it.

2. Enhancing of effective mobilization of unions' participation in forums for green jobs policy making

3. Embracing of ILO decent work agenda through improved social justice and social dialogue

When the scope of knowledge of strategies by unions is widened, leaders and membership as well as the community are made aware of the environment they work in and the impact it has on human life and the physical environment. When the society understands the situation, they begin to get involved and contribute positively whilst diffusing the tensions of job insecurity that the unions are experiencing. Union strategies become effective when its environmental activities are incorporated in its goals and analysed in the collective bargaining of priorities.

When unions are effectively participating in forums on green jobs policy making, they will be able to present their concerns from membership and community towards a fair policy that will benefit everyone. Participating in the 'Just Transition' is one way of ensuring that social challenges are addressed. Currently there is not much participation of unions in climate change issues and solidarity with environmentalists needs to be promoted in order to enhance the synergy of the struggle for a sustainable environment.

The research provides literature which can be used by trade unions and other environmental agents. The report shows the problems and solutions on green jobs and labour's strategies to address them. This knowledge can be utilized through literature, awareness campaigns and seminars in which environmental and social issues will be discussed.

The pillars of International Labour Organization's decent work agenda - mechanism which is aimed at improvement of working conditions include social dialogue, social protection, promotion of rights at work and decent employment. COSATU and NUMSA's participation in this research helped to ensure that there was social dialogue with the employer regarding the

green jobs and that jobs are protected. This will embrace ILO's decent work agenda. In turn, decent green jobs and decent environment for its membership and the community will be encouraged.

The intrinsic link and equal threat of capital on labour and nature provide theoretical rationale and developing international environmental union policies can help provide empirical rationale to study environmental labour issues. Such studies are emerging with multiple tasks and issues which are urgent and unresolved. They should be multi and inter-disciplinary studies which include different theoretical approaches and methodologies from macro systems to micro studies of workers' identities and practices.

Trade union policies are mainly for the industrial unions as they tend to be vulnerable to environmental criticism for being responsible for or contributing to carbon emissions, global warming and climate change. This excludes workers in the north who work in service sectors and offices whose requirements are overlooked yet they too contribute to climate change. There is need to investigate labour policies, effects of climate change and environmental degradation on workers and working conditions. Currently, limited studies have been undertaken to connect the areas of environmental and labour studies.

1.4 Aims and Objectives

1.4.1 Main Objectives

The purpose of this study is to observe and investigate COSATU's and its affiliate NUMSA's responses to the challenges of green jobs in a case study.

Studies have shown that unions have not given the issue of climate change and green jobs much attention. Some writers like Foster and Magdoff (2011) seem to believe that the future of labour hinges on its ability to forge social struggles which can be used to avert both environmental and human exploitation. Other writers like Cock (2011) have alluded to the fact that unions should endeavour to forge alliances with environmental organizations not just for occupation and health issues, but for communities at large because they are the ones who bear the consequences of climate change. Other scholars like Pillay (2011) believe that efforts by the corporate world to avert the problem of environmental degradation and sustainable development is just a 'green wash' to economic growth and profitability and their continued dominance to global and national discourse and action. Capitalists have downplayed the problem of climate change and questioned whether it is really a serious problem while mainstream economists have indicated that efforts to cut carbon emission are not economically viable (Foster, 2008). This research explores the role that unions have played in the pursuit of a fair, sustainable and equitable transition to "a green economy" and how it is to be achieved.

1.4.2 Specific Objectives

Specifically, the research addresses the following objectives:-

a) Explores how unions in South Africa understand the concept of 'green jobs', how green jobs affect workers and the community at large

b) Investigates union's response to the 'green jobs' initiatives and how it can succeed in putting its policies into practice through a case study involving COSATU and its affiliate the National Union of Metalworkers South Africa (NUMSA) whose majority of its members are better skilled

c) Investigates unions' awareness and mobilization strategies and approaches towards 'green jobs' in order to yield conclusions and uncover challenges which the unions are facing while implementing these strategies

d) Examines COSATU and NUMSA's initiatives against government policies like NDP, NGP and other specific policies like carbon tax and laws to see if they were complementing each other or not

e) Compares the understanding and awareness of green jobs, the 'Just Transition' and renewable energy policies by the union leadership with that of their members.

1.5 Limitations of the Study

This study was faced with a few limitations in its bold attempts. Firstly, the focus was on responses to green jobs in South African trade union which is generally a new area of study. Secondly the study was limited to the use of documentary analysis of government and trade union policies, congress resolutions, participant observation in addition to interviews. However the research was not able to conduct focus group discussions with shop stewards as it proved difficult to get them together at once and that most of them lived far away from each other. The constraint of time was another limitation as the researcher combined research and coursework during this period. Insufficient resources hindered deeper interrogation of some issues and this affected decisions and design choices in the study. Politically, it was a challenge to meet with most officials from government departments because once they realized that the researcher was coming from the trade union, they had a feeling that the information may be used against the government, hence they developed some negative feeling and minimized the scope of their cooperation. However the researcher managed to convince some participants that the data

collected was solely for academic purposes and that the information given would not be used in any other way.

1.6 Subsequent Chapters of the Report

Thus far the background and context to the research has been explained as well as problem statement and the rationale. Aims and main and specific objectives have also been defined. The subsequent chapters will focus on:

Chapter 2 Literature review

The purpose of literature review is to discuss key theoretical concepts and relevant literature to the study. It identifies dominant theories like capitalism and green economy and labour. It notes that these theories speak mostly to the issue of green jobs. The chapter also highlights the Marxist school of thought on ecology in understanding social relations between climate change and capital and examines potential solutions to the research problem.

Chapter 3: Methodology

The chapter describes the methodology used to conduct this study. The following have been outlined: research design, population and sample size, sites and context, data collected of primary study and processing methods, data analysis, access and ethical considerations.

Chapter 4: Labour's Responses to Green Jobs

This chapter presents the examination of the extent to which COSATU was responding to the issue of green jobs. This report also highlights whether the measures being taken are adequate to effect changes or not. It consideres the cross-cutting aspects of green jobs and determines how

COSATU is approaching this through analysis of the federation's responses and interactions with other stakeholders like government and environmental organisations.

Chapter 5: Case Study on NUMSA's Responses to Green jobs

The chapter presents the responses to green jobs in a case study of NUMSA, an affiliate of COSATU. But before that, the report will show the history and political organisation of the labour movement in South Africa. It will also show the history of NUMSA highlighting legacies, debates, context and strategic decisions that have shaped the union. Noteworthy are the union's ideologies, strategies, tactics and the influence of its traditions in discourse. It also identifies internal management of NUMSA's diversity emphasizing the union's innovativeness with regard to green jobs. The findings are outlined according to the aims and objectives of the study. After this, the initiatives that NUMSA is undertaking will be presented.

Chapter 6: Conclusions and Recommendations

In this final chapter of the report, recommendations on issues raised are suggested and conclusions are drawn from the report considering the current literature and NUMSA's position on the findings of the study.

1.7 Summary of the Chapter

The introductory chapter described the background and context to the study, problem statement, rationale for the research and its objectives. A summary of subsequent chapters was then briefly described.

Chapter 2: Literature Review

2.1 Introduction

This literature review covers the theoretical and conceptual framework on the concepts that affect environment and labour such as capitalism, green economy and unionism. The relevant literature reviewed include: international responses to climate change, South African government's responses through policies like new growth path, new development and trade unions' responses. It also looks at unions' ideologies as well as political and social alliances of unions with government and other civil society organisations. This research report establishes whether the responses to green jobs by COSATU and NUMSA are different thoughts within labour regarding the Marxist position on ecology. It discusses the debates between orthodox and ecological Marxism thoughts as NUMSA is pursuing the socially owned renewable energy projects.

2.2 Theoretical and Conceptual Framework

Definition of key Concepts

Below are the definitions of concepts which form the theoretical framework of the study.

2.2.1 Capitalism

According to Karl Marx, capitalism is an economic and social system in which production is mainly for amassing of wealth by generating profits and it promotes accumulation. It is characterized by self-interest and competition in the market. The logic of accumulation and competition forces the capitalist to increase productive forces of labour, develop new

technologies and expand new markets carrying social and environmental costs with it. Foster (2011) mentions six impacts of capitalism on society namely: income and wealth polarization, increase in reserve army of labour, periodic economic crises, society and environmental devastation, war and imperialism and destruction of people's potential. In addition, he calls capitalism as an unplanned and anarchic system which minimizes social regulations and monitoring with unintended consequences termed as 'externalities' to a rational and perfect system. Social and environmental costs like ecological damage, inequality, high unemployment and poverty occur because they are not part of the economic costs and profits. Foster (2011) cites William Kapp who observed that capitalism should be seen as an economic cost of production which although unaccounted is shifted to third persons or communities.

We cannot talk about climate change or green jobs without talking about capitalism because it is at the root of capitalism which is geared towards profit maximization that both workers and the environment are being exploited. Without doubt, industrial capitalism has contributed to climate change through carbon emissions to a large extent whilst it is acknowledged that other natural phenomena can cause it (Pillay, 2011:276).

Environmental scholars such as Foster and Magdoff (2011) have strongly rejected the schemes of 'green capitalism' reforms and have argued that the struggle to reverse environmental degradation requires an understanding of the economic reality. As far as they are concerned, efforts to reform capitalism along ecological degradation using technology will only be missing the point. Foster also retaliates that environmental conditions that bear most directly on human society and economic development must be executed to include social issues such as water resources and their redistribution because all these are issues related to sustainable development.

The looming ecological disaster is caused by forces of capitalism and the reluctance of those in government authority to make necessary changes to avert it (Foster, 2011).

2.2.1.1 Types of Capitalism

Since the discovery of minerals in South Africa, all economic activities have been subordinated to the needs of mining and energy sectors. The two sectors remain the centre of economic focus leaving other sectors like manufacturing to secondary position (Pillay citing Fig et al. 2011). Attempts to shift towards green jobs have come about due to climate change which has caused harm to the environment. While there seems to be some efforts to deal with the issue of environmental crisis worldwide, developing countries show reluctance to move out of rapid fossil fuel-based production. They demand that developed nations should commit themselves to transform their economies and compensate them adequately. It is only a few countries like Bolivia and Ecuador which are prepared to comply with a move towards more balanced, holistic, sustainable human development path (Pillay, 2011).

Capitalism uses different approaches in tackling environmental issues, one of which is the suicide or fossil capitalism in which capital maintains the status quo and carries on business as usual. This approach sees no problem with climate change and is a dangerous position to adopt although it is currently the common approach by those countries which are proposing to adopt green-wash alternatives. The second one is green capitalism which is a shift from fossil energy economy towards low carbon or renewable energy economy. This is an attempt to use renewable energy based on capitalist principles of indecent and informal employment as seen in China.

The third paradigm is the Green New Deal also known as decent capitalism which compromises social and capital interests. It recognizes community participation, state intervention and also

market participation in the green economy. Lastly, there is the Eco-socialism which is a new kind of socialism that combines ecological and social issues and supports the collective democratic control of production. Under eco-socialism, markets are less prominent and this paradigm aims at decommodification of means of production. It also supports the sustainable human development which is close to Marx notion of communism.

2.2.1.2. Green Neoliberal Capitalism

Even with no binding agreements on reduction of carbon emissions after 17 years of negotiations, the South African labour movement is now showing commitment to what is called 'just transition'. These responses can be a narrow defensive or transformative approach of the traditional protection of the working class or drastic changes in production and consumption patterns respectively.

Cock sees the ecological crisis as an opportunity for the movement to 'demand the redistribution of power and resources, challenge the conventional economic growth and create an alternative development path' (Cock 2012). This can also set a platform for building alliances of 'mutuality despite differences' at transnational level. Cock suggests that these alliances should involve the active participation of workers in redefining and reinventing the solidarity.

Some capitalists signal that it is still permissible to expand through 'green capitalism'. Others find this as an opportunity for accumulation by transforming nature and social relations into economic relations which can be solved through technological innovations and expansion of markets to make more profits. This will involve carbon trading, making the crisis a marketing tool, and creating new markets from development of new energy sources among other existing capitalist institutions.

The threat of loss to energy-intensive jobs has moved the labour movement to consider engaging in possibility for 'green jobs' in the transition to the new energy regime. However, the impact of climate change on labour has not been explored and little attention has been given to possible job losses, substitution and retraining. Cock alludes to the fact that whilst some will lose their jobs, there is little indication of the offsetting impact on the new jobs that will be created. Green jobs should mean decent work with living wage, training opportunities and some social security. Cock also expresses NUMSA president's concern for 'green jobs' becoming cheap, exploitative, unhealthy and unsafe.

Despite its failures to combat climate change, green neoliberalism is being promoted as a better way for a global political economy capable of organising and advancing neoliberalism (Satgar 2014). It is being advocated by global institutions which promote neoliberal policy frameworks and influence states to adopt and internalize these policies. Satgar (2014) asserts that the green neoliberal capitalism is another form of 'greenwash' which sustains neoliberalism, capitalism and globalisation based on business-as-usual.

2.2.2. Ecological Crisis

This can be defined as a situation which occurs when the environment or population changes in ways that affects its continued survival. Some of the effects of ecological crisis are depletion of resources like fossil fuels, pollution through emissions and acid rains which causes climate change, deforestation and destruction of biodiversity like flora and fauna. The study focused on climate change because it has a direct impact on both environment and society.

2.2.2.1. Global Climate Change

According to Magdoff and Foster (2008), there are nine Earth System science concepts of 'planetary boundary' consisting of climate change, ocean acidification, stratospheric ozone

depletion, biogeochemical flow boundary, global freshwater use, change in land use, biodiversity loss, atmospheric aerosol loading and chemical pollution. Scientists emphasize the importance of staying within each boundary for the climate and environment in the past 12,000 years called the 'Holocene epoch'. Of these nine sustainable boundaries of climate change, three of which are biodiversity and human interference with nitrogen cycle have been crossed thereby causing a rift in the earth's system while the other 6 boundaries are emerging or yet to be designated (Magdoff and Foster 2011).

Furthermore, there are other manifestations regarding the ecological crisis like the melting of the Arctic Ocean ice during summer which reduces reflection of sunlight and enhancing global warming. As in 2007, sea ice melted 40% more than in 1970. There is also a rise in sea water levels to 1.7mm average every year from 1875 but now it is rising 3mm yearly. Greenland and Antarctic ice sheets may disintegrate causing sea levels to rise. This will affect millions of people living in low-lying countries like Bangladesh and Vietnam. Again, the sharp rate of decrease in mountain glaciers which if 'business as usual' greenhouse gas emissions continue will clear by the end of the century. The Himalayan and Andean glaciers which provide water to Asian people is melting causing floods and water scarcity. Today, Bolivia and Peru face water shortages. Another manifestation is in the warming of the oceans, a scenario which has led to a decrease in the number of microscopic plant-like organisms beneath the ocean during the past 50 years. This may affect the ocean's future productivity. Again the crisis is also causing drought-prone areas to expand under business as usual and already manifesting in northern India and Africa and the rains are causing flooding and loss of life like in Pakistan and Australia.

Recently, warm seasons that upset the ecosystems like the white bark pine tree in USA which provided habitat and food for animals are now becoming 'ghost forests'. This will affect animal

food and make snow to melt quickly thereby affecting the fish. Furthermore, there are negative effects on crop yields as increased carbon dioxide may harm the climate and cause either dry or wet conditions. Asia is experiencing crop failure because of increased night temperature causing plant respiration. In Africa, temperatures over 30 degrees reduce corn yield. The world is also experiencing species extinction as climate zones shifts. Already migration of over 1000 animal species has taken place. Of all these planetary boundaries, climate change is the biggest and most immediate threat as it cuts across all the other boundaries. Human action of inducing greenhouse gasses is affecting the climate and will affect most species including ourselves. The temperatures are rising with 2005 and 2010 being the warmest in 131 years.

Global climate change is becoming a worldwide concern and governments and organizations are working together to mitigate the impact of the climate crisis which Cock (2012) says is 'deepening'. However, while negotiations are happening regularly, there has been no global binding agreement to reduce carbon emissions. Emissions of carbons continue to rise causing great impact on both workers and the environment. Foster and Magdoff, (2011:13-16) have written about indicators of accelerating problems which are directly linked to climate change and are already manifesting. This shows that climate change has a tip-off effect which quickens the change and its effects. The melting of white ice is decreasing the earth's reflectivity thereby increasing radiation and global warming. This reduces the tipping point periods beyond which the process of disintegration of ice sheets in Greenland and West Antarctica cannot be stopped and this leads to rising sea levels.

For the purpose of this paper, the Global climate change has been linked to the Green Economy which is elaborated separately below in order to demonstrate the relationship that the two have.

2.2.2.2. The Green Economy

Green economy is defined as 'an economy that improves human wellbeing and social equities while reducing environmental risks and ecological scarcities' (UNEP 2011; Sustainlabour 2014). It is characterized by low carbon, resource efficient and socially inclusive economic practices. Growth is achieved through investments that reduce carbon emissions and are energy efficient without damage to ecological systems. When society is included, public expenditure, policy reforms and regulatory changes are identified and supported. The focus of such changes enhances, maintains and rebuilds nature and an economic capital which protects the poor as their livelihood greatly depends on the environment.

The key green economy interventions are: addressing environmental and market failure which has negatively impacts third parties but cannot be priced, limiting government subsidies in unsustainable production that exploits natural resources and promoting investment in green economy areas like fostering infant green economy. The 21st century green economy finds itself amidst neoliberalism and crisis-prone capitalism which places the TNCs and financial institutions at the centre of development at the expense of nature. This green neoliberalism seeks to combine among other market centred means the commodification of nature, carbon trading, development of clean energy and carbon capture and storage to keep the capitalist system going despite the crisis.

2.2.3. Different Schools of Thought on Climate Change

2.2.3.1. Market Liberals

In conceptualizing green economy and labour, there are different schools of thought in approaching international political economy (IPE). Satgar (2014) uses neo-Gramscian perspective of International Political Economy which shows the transformation of government's

practices and ideologies of control when defining models of accumulation, state-citizen relations and its relations to the rest of the world. This is challenged by globalisation and the impact of global recession which restructures the state forms and actions. However, developmental theorists like Amsden (2007) and Chang (2002) overlooked the fact that humans are capable of inducing climate change and do not consider the ecological effects in development of states. IPE engage in greening the economies, state ideologies and practices and industrialization and support the remaking of a globalised capitalism through the 'green state' (Satgar 2014).

The first concept is Market liberals' whose understanding of the environment is based on neoclassical economics and science theories that economic growth is good for humanity and the sustainable development in which today's needs are met whilst taking into account future generations' needs. They believe that production and consumption are essential for improving ecological conditions even though they increase inequality but eventually everyone benefits. These ideologies are promoted by international organisations like WTO, World Bank and even media publications. Market liberals support globalisation as a stimulant to economic growth and assert that good economic policies are essential to improve the environment (Clapp and Dauvergne 2011).

To market liberals, it is the lack of economic growth, poverty, absence of good policies and market distortions that cause environmental degradation. They argue that globally, the environment has not reached a critical state and that technological advancement could help to restore the damage caused by lack of economic growth. Human ingenuity is seen as unlimited and capable of solving ecological problems as and when it occurs by using technology. Furthermore they promote globalisation, minimization of government interventions,

strengthening of institutions like property rights and use of market tools like taxation to resolve market failures.

2.2.3.2. Institutionalists

The second group are the Institutionalists who focus on the need to strengthen global institutions and state capabilities in handling global political economy and do not see population growth, inequality as hopeless situations. Their analysis is mostly published by international organisations like UNEP and by academics who argue that lack of cooperation is the key to environmental degradation like the failure of the 2009 Copen Hagen meeting on climate change to reach an agreement.

For 'institutionalists', globalisation should be a way to enhance environmental cooperation and management and also improve the living standards of the people. Institutions are seen as important elements in making decisions for sustainable development and management of common resources. Clapp and Dauvergne (2011) asserts that institutionalists advocate increased aid to developing countries in order to improve the environment and transfer of knowledge and technology through organisations like the World Bank and UNEP.

2.2.3.3. Bio-environmentalists

Third perspective is held by the Bio-enviornmentalist and according to Clapp and Dauvergne (2011), this perspective is based on physical science and argues that the earth, like any living being, can only support life to a certain limit and that man is 'anthropocentric' and self-interested capable of over-consuming the resources beyond the earth's carrying capacity. It views population growth as a key to ecological challenges and sovereignty principle violates ecological principles as individuals seek to make gains at the expense of others.

Another assumption made by bio-environmentalists is that overproduction as a way to economic growth is the cause of environmental degradation and sees high consumption and population growth as factors which exploit the limited resources. However, they blame globalisation for exacerbating consumption in 3rd world countries which are already overpopulated and for having low environmental standards. They advocate for the reduction in economic and population growth as a way to a more sustainable development.

Environmentalists warn that at the current rate of population and economic growth, both the climate and biodiversity will be destroyed and the future generation will be ruined. Changing our economic system by bringing in energy efficiency, replacing green energy sources for fossil fuels and introducing green technologies like carbon capture will help reduce the impact.

2.2.3.4. Social Greens

The forth is the Social Greens which is the key concept for this paper and according to Clapp and Dauvergne (2011) this group holds the fact that economic globalisation is the key contributor to environmental degradation and increase in injustice and inequality among nations. Globalisation is viewed as a 'modern version' of domination and control. They advocate for social reforms beyond strengthening institutions and commodification of resources and assert the need to focus on local communities' control of social and environmental relations within small scale economies. To social greens, community autonomy requires empowering those who have been marginalized by globalisation and also the inclusion of women, local communities and the poor into environmental and social justice discussions.

Some use Marxist theories which recognize that capitalism had exacerbated global environmental injustice through unequal distribution of income and power. Again others use

neo-Gramsican perspective to look at how hegemonic power and influence of big corporations and patriarchal relations contribute to ecological challenges.

2.2.3.4.1. Ecological Marxism

The key school of thought is the Ecological Marxist Approach which has a holistic developmental approach and balance. This is also known as eco-socialism. This approach criticizes capitalism and believes in social equality. The Ecological Marxism is a departure from the Orthodoxy Marxist perspective which takes industrialization as the key to job creation and regards environment as secondary. It is a concept based on continuing development of critical and basic social science and practically rejects any notion of Marx's value theory as being incomplete and inconsistent with profound implications on capitalist theory. According to this theory, markets as a capitalist feature need to be controlled and eventually eliminated. It sees capital growth as vital for human progress and focuses on capitalism transcending into socialism and communism in which industrialization is continued and enhanced while redistribution of fruits of production is shared equally among humanity (Pillay citing Ponting, 2005; Barry, 2004). Again the relationship of material production and nature depends on mode of production or labour exploitation much more than on environmental conditions (O'Connor, 1998). The concept is also a departure from the Classical Marxist approach which is based on a narrow belief that economic growth is dependent on continuous supply of fossil fuels and raw materials and that social democracy should just be concerned with the redistribution of production in the process. Classical Marxism does not address the ecological issues as a critical component of the 21st century social and political economy and sees them as beyond human ability to intervene. Marx's attack of Malthus's Population Theory was the basis on which Marxism and ecology discussions interacted. It perceives ecology as against industrial growth and the working class

and discussion about environmental concerns are seen as ideologies of capitalist interests. Again to a Classical Marxist, ecology is a way to withhold progressive revolution of the proletariat and development of communism. Ecological debates are seen as an ambition to return to the old agrarian, social order (Barry 2007). According to Barry (2007), this only confirms the backward, conservative and anti-democratic nature of Marxism and socialism since ecological concerns and its supporters are seen as 'Malthus with a computer'. This has led to many left-wing adherents to see environmentalists as reactionary right-wing people but now there is new thinking within the left especially the unions to take natural conditions of production into account within the class struggle.

The Ecological Marxist approach is a multi-dimensional approach which considers the crisis as a complex relationship between economic, social and ecological factors and is rooted in industrialization based on fossil capitalism. Both Marxists and socialists hold that dominating nature is a way to gain a free and equal society yet Eco-Marxists believe that domination and control of nature should be rejected. Eco-Marxists like O'Connor and Foster show that there is coherence between eco-Marxist and eco-Socialist political economies which the left-wing is rebuilding in analysing the ecological crisis as a 'second contradiction of capitalism'. It focuses on social distribution and environmental justice across the globe and democratic and social control of the environment and economy. Ecological Marxism promotes ecological sustainable production systems as a precondition for a free and equal society and supports non capitalist forms of organisation of social economy.

Both economic and ecological issues are connected to capitalist contradictions even though ecological crisis started before capitalism; it is evident now that degradation has worsened under it. Burkett (2006) argues that O'Connor's assertions that Marx speaks about nature and social

conditions of production have prevented engagement between ecological economists and Marxists. This has paved way for neoclassic concepts into ecological economics and has reduced the multidimensional aspect of the anti-market current (Pillay (2013) citing Burkett).

2.2.3.5. Relevance of Marx Analysis of Ecological Crisis

According to Foster, although neglected, Marx's writings as cited in Pillay (2013) are crucial in providing a systematic treatment of things like soil fertility, organic recycling and sustainability, emphasis on the metabolic rift between human production and its natural conditions (Foster, 2010). Marxist theoretical approach to the concept of social-ecological metabolism is based on the definition of labour processes which describes human relation to nature through labour (Foster, 2010).

Pillay (2013) shows the relevance of both Marx analysis of the capitalist economy and ecological crises. This disproves the dominant view that Marx was anti-ecological although some environmentalists assert some notions of ecological insights in his writings. Foster and Burkett (2012) inspire the new ecological Marxists who argue that Marx had a systematic approach to nature and environmental degradation despite being prominent in social contradiction at that time. If Marx was alive today he would have emphasized on ecological crisis as much as social crisis (Pillay 2013).

Marx's views on environment and the contradiction embedded in capitalism question the Promethean views of Marx shown by Marxists and non-Marxists. His writings reveal Marxist view on sustainable development even before the 1982 Brundtland Commission's definition of preservation of natural resources for future generations. Marx (1894) wrote that no one owned the earth but are only beneficiaries and should bequeath it in a better state as good heads of households.

Marx exceeded the compromising state of Brundtland between ecological sustainability and economic growth which resulted into corporations continuing to accumulate and increase carbon emissions at the expense of the climate for the past 30 years. 'Greenwash' capitalism was seen as a way to sustainability (Pillay citing Bruno and Karliner 2004). Yet to Marx (1887), private ownership of resources needed to change if real sustainability was to be achieved. He saw both labour and nature as sources of value as advancing capitalist agriculture robbed both the worker and the soil which are the original sources of wealth and that fertilizing the soil was a way to ruin fertility sources.

Marx's theory of metabolic rift in the Communist Manifesto indicated the rift between man and nature and posited that man being part of nature is obliged to respect nature. Both were part of labour only that man coordinated the process to achieve his wants thereby changing his own nature. For him, capitalism had broken this metabolic interaction and threatened the existence of the earth. Despite his inability to fully explain the impact of this rift, Marx was able to foresee the dangers and systematically explained them in his thesis.

This metabolic rift is a strong evidence of Marx's ecological expressions made in his time. To him the growth of urbanization reduced agricultural population and increased the rift of social metabolism whilst destroying soil fertility through international trade (Marx 1894). Marx also pointed out that capitalist production destroys soil fertility, the health of workers as well as the intellect of the communities. The above gives a picture of how Marx and Engels advocated the supremacy of nature's law and were more interested in explaining the limits and possibilities of technology as a solution. Technology needs to serve the interest of the society for it to be useful to the laws of nature.

Pillay cites Foster (1999) as asserting that Marxists did not put the ecological issues during the last century until Stalin started industrialization and obliterated the ecological movement in Soviet Union. State capitalism of industrial development differed from that of the production treadmill of West Europe. The Soviet Marxists liked the promise by Soviet leaders to develop their industries beyond the West.

Despite Stalinism horrors, only a few democratically minded Marxists abandoned Promethean emphasis of Stalin. According to Foster, it was the aversion to positivism and natural sciences that led mostly to the side lining of Marx's ecology until 1970s when environmental movements started that it was taken seriously. Some Marxists believe that Marx is not clear about ecological issues but supports Promethean emphasis but Burkett (2005) and Foster (2009) disagree. They insist that nature was embedded in Marx's analysis. Foster suggests that Marx was much immersed into socialist revolution as at that time it was the issues of working class movements that were prominent hence dwelt more on exploitation of labour than nature. However, he devoted more on ecology after critiquing the capitalist society as a form of sustainable human development which features in the Communist Manifesto where the need for metabolic restoration is made.

For the purpose of this paper, it is imperative to link the schools of thought especially the social greens which involves labour to how climate change affects employment.

2.2.4. How Climate Change Affects Employment

Obviously climate change will have an impact on jobs in specific sectors of the economy as well as the infrastructure that assists the functioning of the economy. Mostly the affected sectors will be energy, water, transport and agriculture and the impact will vary depending on the geographical location like coastal regions and cities. This will force people to migrate and bring

disruption to livelihoods even when the real impact is not easy to predict (Scott 2014). Urban migration will put pressure on the job market as well as concentrate climate risks especially in the coastal regions.

Research is showing that taking measures to tackle climate change and putting in place adaptation of robust measures to ecosystems can create jobs in energy conservation, renewable energy and environment conservation. The creation of new jobs needed to tackle and adapt to climate change with measures such as renewable and decentralized energy production, construction of resilient infrastructure to maintain economic activity and the shifting of agriculture activities to other areas (Scott 2014).

Climate change is threatening sustainable development in many ways. As climate change affects agricultural production, workers are being challenged with food insecurity mostly in developing countries. Increasing events of extreme weather is also having an impact on economic activities and viability in many sectors. The jobs that depend on ecosystems such as tourism, agriculture and forestry will bear a direct impact of climate change. Sectors like energy, water and telecommunications are likely to be disrupted through floods, droughts storms and temperature extremes. The impact of climate change on jobs will be both direct and indirect as some jobs will be created while others will be lost in the process and it will be mostly the poor in developing countries who will bear this blunt.

Mitigating climate change will require new skills hence the need to upgrade workers to be able to fit into the green jobs like renewable energy, decentralized and energy efficiency. The energy sector as the largest emitter of greenhouse gases faces challenges of delivering energy services with low emission. Increasing efficiency and behavioural change from where energy power

stations are to the end user can improve mitigation whilst increasing use of renewable technologies and carbon capture and storage (COSATU 2011).

2.2.4.1. Unionism

The concept of unionism in this report will dwell much on the trade unions' organising strategy of social movement unionism. It will emphasize the innovative practices beyond common traditions in reclaiming trade unions social values which have been eroded in the recent times. Most importantly, the innovations will include style of leadership, effective mobilization and involvement of the ranks and file in innovation whilst recognizing the limitations of implementing the same.

2.2.4.2 Theory of Social Movement Unionism

The theory of social movement unionism will be highlighted in looking at labour and the green economy where labour responds to the challenges of green jobs. Van Holdt (2002) emphasizes the need to concentrate on understanding the trade union's relations with institutional dimensions. Realizing the difficult challenges facing trade unions in recent times, some trade union activists and scholars came up with social movement unionism as a new strategy.

According to Von Holdt (2002), Social movement unionism was started by scholars who wanted to understand the eruption of militancy in trade unions in the 'South'. They developed a new conceptual framework as an innovative form of unionism which will revitalize trade unions in the industrial sectors. This concept is relevant as trade unions now face challenges with the changes in political, economic and workplace conditions. Hirschsohn (2007) asserts that SMU emerged in South Africa under a reformist authoritarian state when trade unions begun to associate with social movements in order to protest against the apartheid regime. Together, trade

unions and the civil society managed to change the political and syndicalist structure toward democracy by linking workplace to community struggles.

SMU is a distinct style of unionism which combines conventional institutionalized collective bargaining with social movement's social actions linking workplace and community issues. SMUs may assert its independence or form political alliances with social movements and political parties. It is a non-racial democratic movement which advances the workers issues within the context of political struggle and social context. It sees workplace politics and community-state power issues as a struggle for social change, human rights and social justice. SMU uses radical reform strategies such as negotiations combined with mass mobilization and general strikes whilst avoiding being a ruling party. The leadership subjects itself to worker control through participatory and representative democracy where open debate and workers participate in decision making processes (Hirschsohn 2007).

SMU is characterized by an enduring commitment to participatory democracy, political independence and involvement in community struggles. Under SMU, workers are the ones that control their leaders and policies through participation in decision making. However, in South Africa, SMU started facing challenges in 1990 due to political liberalization and economic restructuring which means it had to shift from militancy to strategic unionism (Hirschsohn citing Von Holdt 1992).

NUMSA identified the strategy of social movement unionism in the early 1990s as is known for both strategic innovation and militancy (Von Holdt 2002). SMU is a highly mobilized unionism which embeds itself in community alliances and commits itself to internal democracy and transformation of societies. In South Africa, SMU is seen as a struggle to lift the standard of

living for the workers through grassroots activities in articulating non class movements. Von Holdt explains the dimensions of SMU as reflecting new class consciousness, societal relations with state, communities and political movements and a sense of collective identity. The new social movement unionism works around networks which emphasizes its autonomy. Castells (1996) portrays the emergence of network society whose actions surrounding organized networks as necessary to modify processes of production, power and culture.

Some people criticize SMU on the replacement of collectivism with individualism which they claim does not have much support yet others have minimized the relevance of class based analysis which sees the confinement of class politics to matters of redistribution. SMU sees a new trend now in which workers form alliances with civil society organisations to achieve a set goal for their economic and social justice demands.

In his article, Fairbrother (2008) articulates the traditional activities of trade unions that qualify them to become social movement unions. These are ranks and file mobilization, collective action beyond workplace issues, building alliances with civil societies and framing political and transformative demands. The actions expand the scope of union activities and embed labour into the communities. Pillay's (1996) definition of SMU identifies them as autonomous mass based organisations with the aim of bringing about social change but not through forming political parties. Their characteristic can either be progressive, reactive or both. To him, progressive unions are those that work towards a universally egalitarian social order and the reactive ones are those that try to reintroduce inequalities under different conditions (Pillay 1996).

2.2.4.3. Modelling Social Movement Unionism

According to Hirschsohn (citing Fine 1992), the interrelationship between 'syndical' and 'political' structures explains the emergence of social movement unionism and its association with the extension of some rights to the disadvantaged groups as a response by an authoritarian state to political pressure. In developing a mass movement, there is need for formation, recruitment, education and political achievements.

Firstly, shop-floor worker control union entrenches participatory democracy in which workers demand and influence decisions through their representatives. In participatory democracy, authority and power rests with members and not officials which results in a positive impact on members' participation. Secondly, the South African labour laws of 1979 allow unions to form 'syndical' structures and institutionalize collective bargaining which protects union members from unilateralism and authoritarianism. Bargaining helps unions make gains for their members and increase satisfaction and loyalty of their members (Hirschsohn 2007). Again Hirschsohn supports Tilley's argument that SMU emerges when the business of social movements is to challenge the government together with other social and political partners. In SMU, the union's purpose is advanced through worker control not leaders' strategic decisions. In order for SMU to maintain its uniqueness, it focuses on worker control and continuous education of its members on politics and union policies. It also forms alliances with community and other political and social organisations.

These attributes of worker control, shop-floor democracy, continuous participation and militancy are critical to the emergence and maintenance of SMU in order to keep membership support in its transformation agenda.

2.2.4.4. SMUs in Developing Countries

Studies by Hirschsohn (2007) on SMUs in developing countries have shown the presence of self-perpetuating participatory democracy at factory level and that the democratic features of SMU have gone beyond authoritarian rule to democracy. The tenets of member satisfaction, loyalty and militancy to enforce change still support the SMU's agenda for transformation. This is what makes SMU different from business and political unionism although it shares political unionism's agenda to change the society in accordance with workers interests.

Although members perceive that with the coming in of democracy, worker control has declined compared to political and policy issues, SMU still seeks to change workers' lives despite the challenges faced. As SMU seeks to address issues beyond the workplace, it is imperative to look at harmonisation of labour and environmental issues.

2.2.5. Combining Environmental and Labour Studies

The past four decades have seen a breach of trust between environmental organizations and labour unions with the former accusing the latter of defending jobs at the expense of nature. Yet trade unions also accuse the environmentalists of putting nature before workers' survival. Historically, labour movements have viewed nature as space for recreation and leisure that needed to be preserved and enjoyed. Secondly, nature has been seen in light of health and safety of its members and in fighting against pollution. Mostly these issues have been dealt with within the workplace to ensure safety in production processes.

But others argue that unions only care about workers and their safety while nature is seen as 'other' external process to labours' production. Nature is not seen as an integral part of the production process. The German Programme of Gotha omitted nature as a source of wealth or labour's ally. However, Marx (1894) argued that *"labour is not the source of wealth. Nature is*

just as much the source of use values… as labour which itself is only the manifestation of a force of nature in form of human labour power" (cited in Marx 1875). Labour movements tend to ignore both nature as a source of use value and human labour as part of nature.

Environmentalists want nature to be protected from industrialization and 'productivism' of both capital and labour. They see production as counter to ecology; as something which is creating stresses on air, water, soil and society's inability to keep and reproduce over time. The different environmental movements all put protection of the environment first as their 'raison detre' and disagree with trade unions in putting nature as labour's other. Both labour unions and environmentalists do not see labour and nature as allies needed for human survival. But labour and nature should be seen as one in the process of producing life though separated historically.

The separation was increased by the industrial revolution when nature became a private asset like any other product causing it to be seen as part of capital in the eyes of workers. Protecting nature becomes a threat to workers' jobs and identity as producers. However, environmentalists see workers as part of capital as nature is regarded as a means to production ends. In defending jobs unions do so at the expense of nature and are seen as defending the economic activities of politicians. Environmentalists also accuse unions of defending jobs without alternative proposals that would protect them from exploitation of owners of nature and controllers of labour.

2.2.5.1. The significance of Studies on Labour and Environment

Separating labour and environmental studies indicate failure of researchers to appreciate the reciprocal importance of the two. Rarely does the academia of these two fields discuss each other's issues. Only few courses on labour discuss the impact of climate change on workers' conditions and rights, or the impact of new technologies on labour, changes in regulation and

markets and the migration of production process. Not much attention is given to the response of these changes like impact on jobs for those in carbon intensive industries. Work is not just wages but dignity, identity and solidarity and when industries suffer, those who work there also do.

Very little is discussed about labour in climate change conferences that address labour issues or its position towards policies, responses in climate change and how its mitigation and adaptation will affect jobs or their rights. Same is true with labour studies which only look at behavioural concepts emphasizing changing consumption behaviours drawing individualistic reductionist sense of people as de-socialized monads.

The societal relations of production, consumption, political and social power are neglected in research which is only concentrating in home, markets and transportation. Though these are important, researchers do not tackle the main issues surrounding production processes and their impact on ecology. Even environmentalists do not say much about the impact of workers' psychology and sociology and the possibility for collective action. Separation of social and natural science where the former is based on social theories and the later on experiments has also contributed to this contradiction.

Scholars from the Marxist tradition like O'Connor developed 'human interaction with nature' and Foster 'Marx's Ecology' both of whom theorize Marxist writings on nature and humanity. Harvey constructed nature from Marxist geography. Suffice to say, there is need for unions to broaden the self-definition from responsibility to membership to include the society at large as pollution affects the health and welfare of all which means the struggle for rights is also part of the struggle for climate change. There is also need to reinvent trade unions as social movements to transform society through alliance building with environmental movements. In South Africa,

Earth life is organising environmental courses for unions in collaboration with COSATU and NUMSA. The unions need to understand that the rural community refuses to be labelled poor and are not keen to exchange life for promised jobs and better life.

Both labour and the environment campaigners need to learn from each other to work together and succeed in their political campaigns and discourses. Policies can be diversified to accommodate each other. Conflicts and frictions due to differences in historical and political priorities like jobs versus the environment are inevitable. However, this is now a false dichotomy as it is envisaged that the green economy will provide more jobs than those lost during the transition to low carbon societies.

The main obstacles to success in environmental trade union policies are its historical and sectorial anchoring, membership numbers and political convictions and willingness to create cooperation with environmentalists. These historical and traditional interests influence and shape the relationship with the state and labour parties. There seems to be a division between global north and global south as a result of colonialism where the south feels dominated by north's unions due to its resource and organising power. The assistance that the north gives to the global south comes with a price of political interference and this affects possibilities of international policies.

2.2.6. Key Concept of the Study: Green Economy

The key concept of this study is 'green economy' which is used to provide a theoretical framework with an emphasis on green jobs that is based on renewable energy. Again, the concept of capitalism will be linked to the cause of ecological crisis because it is capitalism that causes climate change in its quest for profit accumulation through exploitation of the environment. These will link environmental and social justice as these 'affirm the use value of

social life, all forms of life against the interests of wealth, power and technology' (Castells 1997:132). The concept of green economy and labour is central in appreciating the trade unionism's role in green jobs. Foster and Magdoff (2010) assert that almost half of humanity live in poverty and subsisting on less than $2.50 per day. This indicates that there is need for social justice because many poor people are now living under risky environment and have been hard hit by environmental disasters and degradation (Foster and Magdoff, 2010). This research focused on Ecological Marxist theory because it combines ecological and social perspectives.

2.3 Relevant Literature reviewed

2.3.1 Global Responses to Climate Change

Since 1994, the international response to the reduction of GHG has become an issue of major discussion in world forums like United Nations Framework Convention on Climate Change (UNFCCC) known as the Conference of Parties (COP). The aim of the meetings is to come up with legal agreements and commitments to the reduction of carbon emissions but this is yet to be attained. There are key steps that UNFCCC has undertaken since that time with the main aim of 'preventing human interference with the climate system'. Then the Kyoto protocol was enforced in 2005 to operationalize the convention and encourage developed countries to commit themselves to achieve targets to reduce greenhouse gas emissions. The Kyoto protocol recognized greenhouse emission as a tradable commodity in reducing emissions from the planet. This will stimulate green investments in developing countries and allow the private sector to keep emissions at certain levels and make a shift from old to new cleaner technologies.

In 2007, the Bali roadmap and action plan was adopted in order to achieve an effective and sustainable implementation of agreed outcomes and decisions. Until COP17 in Durban which was held in 2011, the focus has been on what to do with the Kyoto Protocol. The enhanced

action on mitigation, adoption, finance, technology and capacity building was adopted at COP18 in Doha held in 2012.

However, at the second round of negotiations which happened in June 2014 in Bonn, work towards a universal climate change agreement and advancement of second period of the Kyoto Protocol has started at ministerial level. Again during COP 19 in 2013 which was held in Warsaw, countries agreed to intensify work to reduce emissions through examining technological opportunities that will further reduce emissions and also sustainable development benefits. COP19 further agreed to support people affected by the impact of climate change, mobilize USD100 billion by 2020 and cut emissions from deforestation.

Rollout of renewable energy and energy efficiency opportunities was examined as technical experts focused on opportunities for action on urban environment and land use. Recognizing that 70% of emissions come from the urban sectors, the UNFCC through the meeting of experts are now focusing on curbing the emissions and building resilience. Since 2011, the climate collective action is increasing which includes implementing energy efficiency standards for buildings and areas for mass transport. There seems to be hope that the universal climate change agreement could be reached during the COP 21 in Paris in 2015.

2.3.2. International Labour Movement's Response to Climate Change

ITUC advocates a 'just transition' which entails the labour movement's involvement in proposing public needs to maximize benefits and reduce hardships during the transition. Just Transition should be a framework where workers and communities are provided with social protection and accorded new opportunities. These include re-training/re-qualification, income protection, reviewing labour market policies, awareness and capacity building. The 'just

transition' needs to be incorporated in the UNFCCC negotiations and that the workers must be involved and protected in climate change decisions.

ITUC and Lo Denmark conducted 28 workshops around the world on climate change issues. Its policy on climate change emphasizes the need for decent and green jobs creation. It calls for inclusion of workers in democratic and social justice to environment decision-making processes. ITUC suggests formulation of policies that will change the world economy into an 'environmentally sustainable production system'.

ITUC recognizes that in the 'Just Transition', certain sectors that use fossil energy will be affected in the transition and therefore proposes investments into low carbon technologies and developing viable low carbon industries whilst supporting skills training for low carbon jobs. Trade unions must be consulted in an effort to protect the workers who are most vulnerable in the production chain as they are exposed to harsh working conditions and loss of jobs.

Historically, trade unions are critical in the collective response and this advantage can help in responding to the threat of climate change. This became prominent in 2006 when trade unions from all over the world met for the first time to discuss the environment and this is the time ITUC was founded. Interest has grown among trade unions around the world to include climate change in their programmes and special environmental sectors of the unions are being created. This shows a transformation of unions beyond fighting for worker's concerns through social movement unionism and eco-unionism to use its skills on the way to 'Just Transition' and low carbon society. This entails that unions shift from being reactive to being innovative in the struggle for new forms of production.

Today, unions need to consider incorporating global issues like climate change into their agenda taking advantage of their local and global solidarity as a potential. For example, ITUC can convince USA unions to oppose exploitative extraction of tar sands which will cause greenhouse gas emissions. International confederations have a vision and capacity to develop broader environmental policy perspectives whilst national federations are tied to daily interests of members. This becomes a constraint in achieving broad social movement unionism. However, the potential power of confederations such as ITUC can help to mobilize workers and take collective action that can bring changes in slowing down or reversing the trends of climate change.

To show ITUC's seriousness in the climate change issues, in 2013 together with other civil society groups it joined in the voluntary withdrawal from the COP19 Warsaw Climate talks. They argued that democratic leaders had failed to take the issue of climate change seriously despite the warnings of devastating impacts. Wealthy nations showed lack of responsibility on carbon reduction and no commitment for financing developing countries, technology sharing and even questioned the demand for 'just transition.' ITUC is optimistic about the capacity of social dialogue despite corporate dominance that exploits workers and destroys the environment through food chains. It therefore commits itself to mobilize workers to ensure that governments are held accountable for creation of decent jobs.

2.3.3. Climate Change Responses by South African Government

South Africa is part of the COP15 Copenhagen Accord which was the outcome of the 2009 COP meeting where countries agreed to extend the Kyoto Protocol to 2012. Recently, the government has passed the Air Quality Act giving the acceptable amount of carbon particles to be released although most companies go beyond this. However, Eskom has asked for an extension of up to

2015 for 16 power stations and Medupi up to 2027 to comply with this Act as they see it as practically impossible to South Africa.

Suffice to say, the government is making a drive towards nuclear energy to constitute half of the country's energy needs by 2025. Currently, the country has two nuclear reactors generating 5% of its electricity and the government is committed to constructing 6 more nuclear reactors by 2030 to meet the ever growing electricity needs. As of March 2014, there were moves to sign nuclear deals with China, Russia and France to build nuclear reactors. This is in response to the Integrated Electricity Resource Plan (IRP) developed in October 2010 to reduce over-dependency on coal-fired energy sources.

The government's response to climate change is towards 'green neoliberal capitalism' through proposing carbon trading and relying on markets and technology for solution. Cock (2011) observes that government and its policies are not coherent as reducing carbon emissions contradicts the expansionary work of building coal-fired and nuclear energy plants to increase emissions and climate change. She argues that the Integrated Resource Plan (IRP2), a mixture of renewable energy and nuclear energy power plants is not the best way of supporting the transition as needed by the mitigation policy.

The government has relaxed on the need to introduce a law on carbon emissions. Through its 2011 white paper, the state only warns of the consequences of global temperature in South Africa but does not suggest any need for a legal framework. Cock (2011) also notes that publicizing the commitment is not enough but rather the government should show how it will reduce the emissions, whether the agreement needed to finance and source technology to help reduce the emissions has been reached. Whilst the Department of Trade and Industry foresees opportunities

through creation of value adding industries, the state seems to separate the green economy from the main stream economy which remains carbon intensive and environmentally destructive. It is important to note that the South African government has minimally responded to climate change issues through its policies outlines below.

2.3.3.1 The New Growth Path

In South Africa, the Green Economy Summit in May 2010 leading to the New Growth Path (NGP) brought with it a promise to move out of the mineral-based energy supply towards a 'green economy', and sparked the renewed interest in bio-fuels as an alternative source of energy and the creation of green jobs. This official interest in bio-fuels was there during the Apartheid regime and it became part of government's strategy as a result of increasing international isolation and its protectionist policies (Attwell, 2011). The South African government launched an Accelerated and Shared Growth in South Africa (ASGISA) which saw bio-fuels industry being singled out as a way to encourage investment as the world became more interested in renewable energy. For Attwell (2011), the debate of bio-fuels is still far from over. However, the state's commitment is rather weak both in theory and practice (Cock, 2007). There seems to be a perception within the South African government that environmental issues are blocking job creation and development. This also is showing state's short sightedness towards the fragility of natural resources (Cock 2007).

Within the NGP and national climate change green paper are 'technicist' ideas such as the uncritical acceptance of the value of modern technologically based society that leads to environmental degradation, depend on market mechanisms like carbon trade to reduce emissions and also uses technologies such as carbon capture and storage and nuclear energy which are dangerous (Pillay, 2011).

It is clear that the challenges of climate change are threatening the future of both humanity and environment but what is less clear is how humanity should respond. Foster and Magdoff (2011) allude to the fact that 'capitalism is not the solution but the problem'. According to them, it is possible for humanity to survive this crisis in order to create a new world where humanity will live in harmony with the planet just like it has attained human freedom through social struggle (Foster and Magdoff, 2011).

2.3.3.2. South Africa Government and Labour Agreement on Climate Change – The Green Accord

In South Africa, the Green Accord is claimed to be an outcome of the social dialogue of the New Growth Path (Patel 2011). It is endorsed and signed by labour movements, government, businesses and the community as a tool for empowering, mobilizing and promoting the green economy which will create jobs by 2020. The Accord is a step taken by the South African government through the economic constituents towards its commitment to protecting the environment. It takes advantage of technological advances to tackle climate change to ensure that risks to environmental degradation are avoided and the benefits to such initiatives are shared equally in the society. The Accord is the basis for job creation and equality by securing environmental sustainability and ensuring citizen participation in the revolution of green technology. The government commits to reduce its dependence on coal-based energy and empower domestic industry to produce such technologies while creating opportunities for workers and the society as a whole.

On signing of the Accord, Zwelezima Vavi – on behalf of labour movements said, "We are excited to sign the agreement that will advance the NGP and create 5 million jobs within 10

years". Vavi pledged the labour movement's commitment to the Accord and support to the goals of green economy.

South Africa sees climate change as an opportunity to create jobs and promote the green economy through partnerships. In other words, climate change provides an opportunity for new economic activities, innovation of new products and processes. It also places responsibility on government, businesses and citizens to do things differently and combine efforts to achieve this goal. Further to that, the accord places the need to localize strategies that will make use of technology in domestic industry capacity, jobs and innovation. This will provide an entry point of economic activities of black economic empowerment and address the needs of women and the youth in the social economy.

The Labour movement made some demands to the Accord like the rolling out of solar water heating systems and legislative requirements for installing solar water heating in new buildings and need for awareness campaign for compliance with the new legislation. It also wants to see more investment in green economy using private and public sector funding and the rolling out of the renewable energy sector, waste recycling, reuse and recovery. Another demand is for the clean coal support initiative and continuous energy efficiency improvements.

The leaders of labour movements including COSATU's president Mr S. Dlamini confirmed labour movement's commitment and pledged mobilization of workers to take part in the green initiative at all levels, train workers, establish cooperatives and maximize the impact of green economy and absorption of labour.

2.3.3.3 The National Development Plan

According to chapter 5 of the NDP, whose main focus is to ensure environmental sustainability and equitable transition to low carbon, the South African government has put in place some main focus areas. These include an acknowledgement that the natural resources endowment is enough to fund the transition to low carbon economy in a diverse and inclusive manner. It also realises that development challenges need to be addressed to ensure sustainable environment and to build resilience to a climate change that focuses on the poor community. Another area is the implementation of carbon pricing mechanisms that target specific mitigation opportunities. It also looks at the need for consumer awareness initiatives to recycling that will turn South Africa into zero waste society.

The report acknowledges the need for developing sustainable green products and services like renewable energy technologies that will create jobs in niche markets where South Africa has a competitive advantage. Again it articulates the need to invest in skills, technology and institution capacity which are critical to support the development of a more sustainable society and the transition to low carbon economy that focuses on institutional capacity building and management structures.

Some of the ways NDP is to achieve the above is through entrenched carbon pricing, green house emission peak by 2025, and contracting 20,000 MW renewable energy. It also proposes the formation of Climate Change Centres which will partner with the academia and appropriate institutions by government with support from business, government and civil society but no law is currently in place to support this initiative (Cock 2012). NDP has also suggested the involvement of all stakeholders in data collection, and public systems for effective planning.

The Carbon pricing and budgeting approach as a mitigation indicates that the main interest of NDP is economic growth which Cock calls 'green capitalism' which relies on the efficiency of markets to bear on nature and its reproduction (Cock 2012). Green capitalism depends on technological advances and market expansion which keeps capitalism untouched. The executive summary of NDP bemoans the absence of partnership in 'the economy that is unsustainably resource intensive' as one of its failures and suggests the involvement of stakeholders like business, labour unions and the civil society.

Satgar (2014) alludes to the fact that although the NDP supports a green development, its support is mainly based on market institutions. However the green economy within the NDP is seen as a route to creation of at least 300,000 jobs by 2030 through the development of renewable energy, clean coal and energy efficiency among other ways. NDP and IPAP support renewable energy component manufacturing despite the fact that the energy industry in South Africa is largely dependent on fossil fuel energy. This shows that NDP's vision is a minimalist response to the transition towards a low carbon economy.

2.4. Trade Unions and Green Jobs in South Africa

The labour movements in South Africa have recently begun to respond to the issues of green jobs. COSATU, the biggest federation together with NALEDI Climate Change Project is a project representing all the affiliates. One of COSATU's affiliates has been a focus on this study because it has shown some level of commitment to get involved in climate change committees. It also intends to continue participating in National Climate Change Committees of stakeholders to strengthen the voice of workers. Internationally, it is active in the ITUC-led response to climate change. Locally, the labour movement is also committed to educate leaders and members to understand how the climate change issue is related to their sectors, encourage affiliates to

develop their own policies on climate change. COSATU calls for affiliates to adopt initiatives which reduce carbon emission and use the shop stewards to promote the policy practice at their workplaces. Behaviour change in reducing wasteful and extravagant consumption that worsens climate change is a prerequisite to union membership and those in leadership positions. Shop stewards are encouraged to include climate change demands in their bargaining agenda, negotiate for education and training in new technologies and processes and ensure management keeps workers informed about changes to which workers should have a say.

COSATU further encourages research and education on the changes that are needed and their impacts on the workers, lobby employers to draw carbon budgets where workers have an input. Affiliates can also take an initiative to use skills levy funds and SETA's to train workers in readiness for the changes in work and invest in low carbon projects.

A call of transnational solidarity is raised amongst the working-class, community and the environmentalists to tackle workplace health and safety, social needs as well as environmental impact on workers as the bearers of the consequences of environmental degradation. This 'global alliance' could be the base of transformative responses and possible successful future resistance. The South African labour movement learns from the British model of a 'million climate jobs' campaign which argues that a real transition must involve workers who will bring the 'just transition' and improve their livelihoods. This involvement of workers ensures that the jobs created are decent as stipulated in the COP17 research findings. COSATU has endorsed this campaign and committed itself to strengthen participation and efficiency in COP17 Coordinating Committee.

In response to the NDP, the South African labour movement has made some attempts to criticize the policy through its tripartite alliance as outlined below. Surprisingly, thirty-four workers were killed during a strike at Lonmin in 2012 two days after the NDP launch when the state turned against workers in order to protect the interest of capitalists. The plan shows the type of response that government is giving to the gathering crisis and sketches alternatives in a social order. NDP lacks the details on how to get the outcomes of its own plan.

In 2008 the tripartite alliance between COSATU, ANC and SACP intended to run an economic policy issue-based campaign before elections and discuss NDP with its partners. NUMSA gave excuse to the meeting suggesting more time to prepare for responses and they were not sure if the union's contributions would have influence on a senior partner. Eventually, the alliance agreed to implement NDP in parts yet the following National budget was said to be led by the same NDP. The Business community seems not to show trust in ANC despite its loyalty of restoring profits to private sector. Head of Banking Association of South Africa requested ANC to 'stop talking about policy and start implementation.

It seems NDP was launched before proper consultations as its targets are not in line with the'Freedom Charter' as it appears to lean to a fairly liberal economic policy. NDP is also seen as incompatible with 'radical economic transition' that is needed at this time. NDP could be a 'symbolic policy' with noble but unrealizable intentions because of the macroeconomic 'business-as-usual', effort to deregulate labour and support de-industrialisation. These economic policies are aimed at squeezing workers and increasing exports and this approach may be undermined by labour unrests.

Zwelenzima Vavi, Secretary General of COSATU calls NDP an 'updated GEAR' and Rudin (2013) alludes to the fact that even though GEAR does not contain issues of climate change, the two have the following similarities: both are 'symbolic policies' with unattainable ambitions. GEAR produces the opposite of what it spelt out. For NDP to allow Mineral Energy Complex to continue making profits it signals its similarities with GEAR.

NDP recognizes the issues of climate change and spells out its negative consequences on livelihood of mostly the poor which may lead to conflict. On the other hand, it does not put across the way forward. It also acknowledges the impact of increasing temperature on South Africa. According to Rudin (2013), the whole idea of getting the transition to 'environmentally sustainable low carbon economy' is nothing but fantasy. Much emphasis has been placed on neo-liberalism and reliance on markets to perform. Markets in this plan have been spared from being the cause of climate change but are seen as a solution to it. This shows that markets are protected whilst claims are being made for a need-based response to climate change solution.

Although renewable energy is the basis of transition to low carbon, NDP does not recognize the urgency of the responses needed and disregards the need to support Sasol's conventional sources of petrol but sees it as a business opportunity for capitalists. NDP acknowledges that climate change will be offset with carbon tax which is perceived to promote 'structural changes required'. The policy paper on tax claims to incentivize reduction or pollution and not raise revenue.

There is not much investment and employment despite recording high profits after Apartheid due to capital flight which is sent to speculative dealings. The proposals for renewable energy do not show any sign of labour intensity programs. Costs for local suppliers of renewable energy are

highly priced and therefore unlikely to be accepted. The nature of competitiveness of South African business takes little regard for job creation. The only few jobs needed in green economy are for the private sector and this is consistent with Neoliberal orthodoxy.

There seems to be a number of contradictions within government local policies such as DTI's Industrial Policy Action Plan (IPAP), Department of Energy (DoE) and Renewable Energy Independent Power Production Procurement Program (REIPPPP). One such contradiction is when the government decided to build another coal power plant after Medupi and Kusile.

Rudin (2013) concludes his appraisal by advising that if NDP is a symbolic policy then the gap between rhetoric and reality will widen and people will realize its chasm and react against it.

2.4.1. Trade Unions and Green Jobs in South Africa

In the past, trade unions in South Africa neglected environmental issues and instead concentrated on jobs as illustrated by the 'Steel Valley Struggle' (Cock, 2007). It was the uprising of the people of the valley in 2004 against a company called ISCOR whose production had caused pollution of the underground water and air in the area. This caused sicknesses like cancer, kidney failure to people living around the area, malformed birth and death of animals as well as crop failure. Cock (2007) observed that even though during the ISCOR incident a union was not present, things should not have reached this far. The trend is however changing as unions are beginning to recognize that the issue of 'Just Transition', a framework for a fair and sustainable shift towards a low carbon economy cannot be implemented without workers and their organizations working together (United Nations Conference on Climate Change 2009).

Recently, there has been an increase in awareness within trade unions on the impact of climate change which is affecting both humanity and the environment. The issue of green jobs is not a

new phenomenon but has lately become an interesting subject in the labour movement in South Africa. The term 'green job' is defined as a process and production of goods and services that aim at alleviating or stopping environmental threat (UNEP, 2008). It is a way of tackling the main source of carbon emissions and also an attempt to move from relying on fossil-fuels to building a low level carbon economy. Green jobs concern the sustainable use of natural resources. Cock has defined green jobs as jobs that "protect the ecosystem, biodiversity, reduce energy material and water consumption with effective strategies and de-carbonize the economy whilst minimizing or avoiding production of wastes and pollution" (Cock, 2011).

The Congress of South African Trade Unions (COSATU), a trade union federation in South Africa is now recognizing the issue of climate change as a social and developmental issue and 'one of the greatest threats to our planet and our people' (National Congress Resolution 2010). They are showing commitment to tackle the issue as seen by the attendance of national office bearers at Durban workshop in July 2011 and the adoption of Climate Change Policy Framework even though, as Cock (2011) puts it, the contents are not clear.

Even with no binding agreements on reduction of carbon emissions after 17 years of negotiations, the South African labour movement is now showing commitment to what is called 'Just Transition'. These responses can be a narrow, defensive or transformative approach of the traditional protection of the working class or drastic changes in production and consumption patterns respectively.

Cock (2012) sees the ecological crisis as an opportunity for the movement to 'demand the redistribution of power and resources, challenge the conventional economic growth and create an alternative development path'. This can also set a platform for building alliances of 'mutuality

despite difference' at transnational level. She suggests that these alliances should involve the active participation of workers in redefining and reinventing the solidarity.

Capitalists' response signals that it is still permissible to expand through 'green capitalism'. Others find this as an opportunity for accumulation by transforming nature and social relations into economic relations which can be solved through technological innovations and expanding markets whilst making profit. This will involve carbon trading, making the crisis a marketing tool, creating new markets from development of new energy sources among other existing capitalist institutions.

The threat of loss to energy-intensive jobs has moved the labour movement to consider engaging in possibility for 'green jobs' in the transition to the new energy regime. However, the impact of climate change on labour has not been explored and little focus has been given to possible job losses, substitution and re-training. Cock (2012) alludes to the fact that whilst some will lose their jobs, there is less indication of the offsetting impact on the new jobs that will be created. Green jobs should mean decent work with living wage, training opportunities and some social security. She also supports NUMSA president's concern over 'green jobs' becoming cheap, exploitative, unhealthy and unsafe.

During the 11th COSATU congress held in 2009, some resolutions were made to increase research capacity on climate change and ensure the working-class are involved to avoid turning climate change into another area of capitalist accumulation. COSATU is also against any means of accumulation that breeds inequality in the form of 'green capitalism'. NUMSA, affiliate of COSATU, describes the transition as a 'class struggle and a critique of capitalism' other than an issue of social dialogue.

Cock (2012) suggests that a labour movement needs to incorporate transformative changes, alternative growth paths and new ways of production and consumption. The movement must propose ways to protect workers from excessive burdens that may come with the transition.

2.4.2. A Just Transition to a Low-Carbon and Climate Change Resilient Economy

Basically, COSATU demands on the Just Transition among other issues are the creation of decent work (living wage, health and safety, gender sensitive and secure employment) through environmentally friendly investments. The federation also demands a comprehensive social protection system and support the conducting of research on the impact of climate change on workers in order to come up with better social policies. It also supports the development of skills and re-training/re-qualifying of workers in preparing them to be part of the transition.

Recently, NUMSA in response to COSATU's policy on climate change has embarked on a Socially Owned Renewable Energy project which aims at tackling the issue of climate change from a social and ecological perspective. This will be highlighted in the case study that has been presented in this report.

2.4.3. COSATU's Policy Framework on Climate Change

COSATU's policy framework on climate change realizes the effect that climate change has on water supply and food prices for workers. There is need for information, planning and organization in order to strengthen the movement in dealing with this coming change. It further recognizes that the fundamental cause of the climate crisis is the expansionist logic of the capitalist system which seeks to accumulate through the cheapest means without regard to labour and environmental exploitation (COSATU 2011). The accumulation is achieved through advertising and marketing, resulting in waste production in form of excess and non-durable

goods (COSATU 2011). One area of carbon emission is through mining and the policy recognizes that businesses externalize the cost of production through damage to health and safety of workers. Such reduction of costs in caring for workers, increasing the price of production and managing the pollution increases the company's profits.

The policy identifies multinationals, countries, sectors, companies and all other collectives as channels for economic activities that cause emissions. The working class struggle is to strategize and act in all spheres of economic and political power whilst advancing justice and gender equality to change the rate of global emissions. In promoting a 'just transition' of the workforce, creating decent work and quality jobs, the policy calls for a legally binding international agreement designed to limit temperature increases to a maximum of 1.5% as an essential outcome of the UNFCCC process. There is need for investment in technology and technology transfer to developing countries which is not fettered by rights to intellectual property. The South African government's position in the UNFCCC processes must represent the interests of the people. It also demands that developed countries must pay for their climate debt and accountability to green climate funds. COSATU expressed that so far no funds from developed countries had been transferred through the climate deal and also fears that this may only entrench existing inequalities. Market mechanization to reduce carbon emission enshrined in the Kyoto Protocol is rejected as it is seen as climate apartheid where the rich (1%) decides to sacrifice the poor (99%) in delaying real action until 2020.

There is need to use the organizational capacity and experience of past struggles in forming strong, organized global movements to force governments into taking proper measures to stop climate change. This requires a strong alliance with social justice, environmental, the academia

and other civil society groups which favour sustainable development. This calls for 'internationalism' a need to organize a cross-border unity and campaign (citing ITUC 2010).

2.5. Trade Unions' Political and Social Alliances

The alliance between African National Congress (ANC), South Africa Communist Party (SACP) and COSATU is one area which the research will focus on because it is a critical indicator of labour movement's progress in advancing worker's interests. When COSATU offered a vigorous support for President Jacob Zuma during the 2009 elections, it had believed that getting Zuma on their side would capture the ANC in pursuit of a more redistributive, participatory democratic trajectory. COSATU's support was in the hope that ANC would prioritize working class issues on the government agenda. However, COSATU seems to play a 'junior partner' in this alliance in that patronage politics and that of the leadership of the working class have compromised their positions by pulling the workers into what Pillay (2008) calls 'symbiotic relationship' with ANC. Instead of concentrating its efforts on organizing and taking up the interests of its working poor, it is busy assisting ANC to achieve its objective of 'swell the ranks' whose primary fight has turned towards sharing the spoils of 'national liberation. According to Pillay (2008) COSATU is busy with marginalized black business interests and claiming their share of spoils instead of empowering the working class (Pillay, 2008). The concern is whether COSATU's leadership is working in the best interest of working class and whether the shop stewards are still in control. ANC is still keen to use workers to consolidate their power at the same time pursue Neo-liberal policies with different actors who articulate redistributive development discourse (Pillay, 2008). COSATU continues to embrace the alliance because it feels that the federation's working class consists of beneficiaries of post-apartheid order and that its oligarchic leadership has also benefitted from the patronage. COSATU has re-emphasized its support for the alliance as seen

during the last congress and had indicated that it is not ready to work with any organization that disagrees with the alliance. Privileging alliance over social and environmental issues has restrained the unions from forging alliances with environmental organizations in this ecological struggle.

According to Heller (2001), South Africa's tripartite alliance shows the incorporation and marginalization of social movement unions by the ANC hegemony in which the organized participation has been swallowed by neoliberal logic of development and administration. This is seen by the introduction on GEAR by the South African government in 1996 as a symbol of turning point for the alliance and diffusion of labour's voice within the alliance. Most scholars have alluded to the fact that GEAR represents the commitment by government to neoliberalism in which consultation and involvement of labour movements within the alliance becomes unnecessary. This leaves the labour movement with a choice either to accept its junior role in the alliance or break off even with the risks involved.

Pillay's (2008) analysis of the 2012 ANC congress at Polokwane emphasized the influence of workers in the outcome of the event. To him, workers were allowed to push the agenda of neoliberalism within the ANC as they maintained the Morogoro (1969) strategy of keeping the ANC as an institution that is biased towards the working class.

2.6. Summary

This chapter started with explaining the theoretical and conceptual framework in the context pertaining to the study. It identified capitalism and ecological crisis, green economy and labour unionism as dominant themes.

The relevant literature reviewed was on the threat of and responses to climate change from international bodies, the South African government and the labour movements. This report will analyse more on COSATU's responses in chapter 4 and NUMSA's initiatives separately in chapter 5.

The next chapter will look at the methodology that the study used.

Chapter 3: Methodology

3.1 Introduction

This chapter presents the methodology used in the study. It presents the approach taken, population and sampling procedures and size, methods of data collection, data analysis as well as considerations that were made on ethical issues. The methods of data collection used were interviews, participant observations and documentary analysis. The study took less than one year of intensive research but ensured an intensive insight into the subject under investigation.

The research involved engagement with participants from NUMSA, COSATU, environmental organisations, government departments and the academia as key informants. The researcher also attended meetings and workshops on subjects relating to the issue of climate change and green jobs. This gave the researcher an opportunity to meet and get more information about key informants who contributed much to the study. Attending these workshops accorded the researcher an opportunity for a deeper understanding of climate change and green jobs. Whilst acknowledging the subjective nature of human beings, the researcher endeavoured to maintain objectivity by ensuring that impressions generated by observation and anecdotes were dispelled.

3.2 The Research Approach

A descriptive and analytical qualitative approach was used to determine the responses of the trade union – COSATU and its affiliate NUMSA to the challenges of green jobs. Qualitative research does not involve the use of standard questions in order to get in-depth information about the question under study (Neumann 2000). This approach used semi-structured questions to get perceived attitudes and motives of the respondents. It also helped the researcher to gain insights into why people act in a certain way. In addition, the approach was used as a technique for

analysing the responses based on theories of social movement and ecological Marxist responses to challenges to green jobs.

The approach helped the researcher to document, analyse and interpret attributes, patterns and characteristics of the study. This approach was deemed necessary because it enabled the researcher to describe in-depth knowledge and responses of the labour movement to the issues of green jobs. It also allowed the researcher to make sense of the reality of the phenomena under study.

3.3 Population size and Sampling Techniques

Sampling is the selection of a portion of the population to represent the entire population in the study. Qualitative study uses small non-random samples with the aim of discovering deeper meaning and multiple realities (Neumann 2000). A purposive sampling technique was used in this study in which the researcher chose the respondents based on known experiences in the field under study. This technique was used because the researcher wanted participants who had knowledge of the issues of green jobs and the labour movement and it also helped to reduce bias from the researcher's judgment. A total of 11 respondents participated in all the research techniques in order to deal with a manageable size and maintain focus on the study area.

Population is the entire set of individuals who participated in the research. The targeted sample included officers from COSATU's research and education sector, NUMSA's renewable energy, education and economic sector, shop stewards who are involved in the renewable energy project and key informants from government departments, environmental organisations, ex-NUMSA officials and the academic professionals.

3.4 Data Collection Methods

The study used 3 methods to collect data and these were: in-depth interviews, participant observation and documentary analysis. In-depth interviews were the main source of data collected and as Weiss (1994) asserts, it provided the researcher with an opportunity to dig out moments that would otherwise be lost. Initially, it was proposed that focus group discussions would be conducted but this was not possible as the targeted NUMSA shop stewards lived in different areas hence it was difficult to bring them together at once. Instead, in-depth interviews were conducted from some of the available shop stewards.

3.4.1 In-depth Interviews

In-depth interviews were conducted as a primary method of collecting data using an interview schedule of semi-structured and open ended questions which covered the objectives of the research. Firstly, the research was conducted in a face-to-face interview with 3 senior officials at COSATU head office as it is the mother body of unions in South Africa who have a rich experience in the green economy and 'Just transition'. The main focus was to find how they were receiving and reacting to the issue of green jobs in relation to their environmental policy and their critique of the New Development Path which stipulates the government's position on climate change. The interview was mainly meant to seek understanding of their position.

Secondly, the research conducted key informant interviews with 2 NUMSA shop stewards within the education, economic and renewable energy sectors. NUMSA is currently showing a response through the formation of "Building and Socially Owned Renewable Energy Sector" and is undertaking projects of renewable energy nature. The main focus was to determine the understanding and direction NUMSA is taking steps to achieve its agenda of a socially owned

project and has made progress in its initiative to invest in companies that are involved in renewable energy. The other area was to establish the leadership and members' understanding and acceptance of the green jobs concept and the Just transition. The research also wanted to establish whether NUMSA is balancing the demands of economic growth, jobs and industrialization with the demands for 'Just Transition' to green jobs.

Again the interview focused on the challenges they are facing in advancing the agenda and checking if these initiatives are in line with the government agenda. The research sought the views of other key informants on issues of green jobs who are outside NUMSA to create balance of information. Thirdly, the Researcher then conducted interviews with an ex-member of NUMSA to get his inner views of NUMSA and its drive towards climate change and creation of green jobs. Another area was to look at the political leadership transition and its influence in the shift towards green jobs. The research required data that is basic to empirical work whilst recognizing that in the interview, the respondent has the power to decide what information to give and how (Chacko, 2004). Semi-structured interviews were conducted using an interview guide.

Fourthly, the study interviewed 2 officials from two environmental organisations which are also working with the unions in responding to the challenges of climate change on labour. The interview focused on their independent views regarding labour movement responses. It also wanted to establish whether the labour movement is forming alliances and if these initiatives are embraced and supported by senior officials in the union.

Further to that, two members of the academia; one from the Economics department and another from the department of sociology who are also involved in climate change issue were involved.

The researcher wanted to seek the views of the academia on how the labour movement understands and responds to the issues of green jobs. The research also sought the views of the academia on how the unions could improve on their relations with environmental groups, civil society and government in responding to the challenges of green jobs. In addition, some government officials from the Department of Energy were also interviewed to see if the unions' responses were aligned to the government policies and initiatives.

Table No. 1 Summary of Interviews

Institution	**Interviewee**	**Contributions**
NUMSA	2 Shop stewards in Research and Development Group 1 ex-member of NUMSA	Provided information on NUMSA's responses to green jobs Provided training and other initiatives that NUMSA is undertaking in responding to green jobs Provided political insights of NUMSA
COSATU	1 official from Naledi 1 official from Research Department	Provided information on COSATU's research initiatives in response to green jobs and

	1 official from Research department	climate change
Environmental Organisations	1 official from Earthlife 1 official from Greenpeace	Provided information on environmentalist contributions to labour on green jobs through the COSATU Reference Group
Government Department	1 official from Department of Energy	Provided information on government's perspective on energy and green jobs Provided information on government's initiatives on climate change
Academic Professionals	2 Professors from Wits University – Sociology and Economics departments	Provided information on NUMSA's response to green jobs Provided information on COSATU Reference Group's research initiative in dealing with green jobs

3.4.2 Documentary Analysis

The research used documentary analysis as a secondary method from NUMSA, COSATU documents relating to policies and any other renewable energy initiatives or proposals made, other related government documents like the NGP, NDP and the Green Accord. Documents such as academic research papers, congress resolutions, policy documents, position documents and submissions made by NUMSA and COSATU were also analysed. These also included documents on green jobs and climate change from environmental organisations. These documents were collected from the website as well as from the participants' offices during interviews, meetings and workshops. The approach used a descriptive qualitative analysis to enable the researcher to document, analyse and interpret attributes, patterns and characteristics of phenomena under study. A total of 10 documents were used for documentary analysis in this research.

This helped the researcher to find out if what NUMSA and COSATU are doing is in tandem with the government's motive in the New Development Path on climate change. Documents written by other environmentalists and economists were also analysed to give an outside perspective of green jobs and to make sense of the reality. This is a new area as it does not have much publications but most of it is still at high level discussion. NUMSA's Resources provided a good source of documentary evidence.

Combining in-depth interviews as a primary source and documentary analysis as a secondary source and matching both techniques helps to reduce bias in the research (Babbie and Mouton 2001).

3.4.3 Participatory Observation

COSATU and NUMSA provided access to enable the researcher attend meetings and workshops on climate change. Participatory observation was therefore used in collecting data during renewable energy-related meetings and workshops. Two meetings and two workshops were attended during the time of data collection. These were meetings that targeted shop stewards, union political leader as well as professionals on environmental and academic issue. The aim of these meetings was to bring awareness to the shop stewards about climate change and green jobs as well as exchanging information between the union and the professionals in these matters. Data was collected using note taking of the main points discussed which were relevant to the research report. The research required data that was basic to empirical work but in the interview the respondents have the power to decide what information to give and how (Chacko, 2004). The participatory observation and casual interaction with the respondents helped to obtain a deeper understanding of issues that could not have been revealed during official data collection procedures (Chacko, 2004). In observing participants, the researcher is able to deduce the individual behaviour and how it is influenced in a social context as observation is done in the participant's natural setting.

But once a common ground was found, fostering a rewarding relationship and actions are done based on deeper understanding of roles of emotions and union structures. Observing participants interacting from an outsider perspective in their natural setting over a period of time helped to close the gap and build rapport with respondents. This also helped in building the link between what was on the ground and what was written on paper in line with the research questions. Knowledge of green jobs literature helps what Chacko (2004) calls 'worthwhile and rewarding

endeavour'. Data was collected through explaining the research purpose to the participants and notes were taken throughout the observation period.

3.4 Data Analysis

The research used non-statistical data as the method used was qualitative in nature which uses a more descriptive and analytical method of analysing the data. Notes were taken during the interviews and a tape recorder was used during transcribing where hand written notes had missed a point and to quote respondent's verbatim. Out of 15 proposed interviews, only 12 were conducted because of time constraints. Permission was requested by the researcher to use the tape recorder and in one interview, the participant refused to be recorded and the researcher relied on field notes and memory to transcribe the data (Weiss 1994). Notes were important as they recorded the researcher's observation of nonverbal cues from participants which would not be possible to be tape recorded during interviews. This technique was also used to capture deliberations in meetings and workshops which the researcher attended.

Data collected was transcribed to form a record for all participants, coded and used to identify themes for analysis during research report writing. After transcription, the data was coded and it was through this process that key themes were identified and analysed manually as the researcher could not get access to any software for analysing qualitative data. The analysis process involved aligning themes to the transcript and compiling them in line with the responses given by participants. Data was also compared to the literature reviewed and documents analysed in order to achieve triangulation of results which made qualitative method an ideal for exploring the responses of NUMSA to green jobs. The researcher therefore used the notes taken, interview schedules and transcriptions for analysing data. The research was conducted in English because it is a common language understood by both the participants and the researcher.

3.5 Access and Ethics

3.5.1 Access

Before the study began, the researcher sought permission to access the participants through emails and verbal communication channels and this was granted. At NUMSA, the researcher was helped to get access from a senior official who assisted the researcher to get to the other participants and COSATU, a member of the GLU committee assisted to provide access to the meetings and workshops. This enabled the researcher conduct a participant observation. The researcher was aware of possible behaviour change among participants with the knowledge of the researcher's presence. However, a formal letter was requested by the government department to allow the participants take part in the interviews and this was facilitated by the programme coordinator.

It was not difficult to build rapport with the participants as the researcher is also a trade union activist and was able to interact with them well. Suffice to say also that getting access did not mean automatic commitment of the participants to the study especially in scheduling of interviews with some trade union activists as they were suspicious of the researcher's motives. The researcher was able to convince the participants having knowledge of political tensions that are usually there in the trade unions under study. The other contributing factor was that the Head of Research and Development Group had just started work and needed time to familiarize with the new environment but still the shop stewards had been there for some time and were of much help in providing information. However, there were instances where access into government departments was very difficult since the researcher was coming from a trade union. A lot of explaining was made through phones and emails prior to the visits in order for access to be granted.

3.5.2 Ethical Considerations

Prior to commencing the research, an ethics application was made in which the research proposal and its instruments were submitted to the Non-Medical Human Research Ethics Committee of the University of Witwatersrand. Ethical clearance was granted by the committee and the certificate was issued.

The researcher ensured unquestionable conduct in that explanations were given to participants about the research to gain the confidence and consent before conducting the research. The researcher ensured that participants were informed of their rights and had consented by voluntarily signing the consent form before the research was conducted and that anonymity and confidentiality were assured. The signed consent forms were delinked from the data collection process. The researcher also kept the responsibility of ensuring that data was protected even after the research was conducted. In this regard, pseudo names were used and all data was securely stored in a password protected device and only accessible to the researcher and the supervisor. Welfare of the participants was ensured in that no minor was interviewed and the participants were also given freedom to give information based on their knowledge and that they were free to withdraw anytime they felt so.

The data set will be kept for a period of seven years before it is destroyed and no third party will be given access to it. However, the research report will be made available to the participants after approval by the Sociology Department and it will be accessible to the public on the Wits University website for further reference by other researchers. The researcher may use the findings for future publications where it is deemed necessary.

3.5.3. Research Project Management

The research processes started with proposal presentation in May 2012 but the researcher could not proceed with data collection immediately due to ill health. However, it was only in 2014 that the work resumed after the Ethics Committee approved the proposal and work was conducted till the end the year. The summary of the work plan is as follows:-

Table No. 2 Project Management in Months

Activity	May12	Jun14	July14	Aug14	Sept14	Oct14	Nov14	Dec14
Proposal Presentation to GLU committee								
Submission of Ethics Application to the committee								
Data Collection Process								

Analysing Data								
Writing Report								
1st Draft Submission								
Editing								
2nd Draft Submission								
Completion of Report writing								
Submission of Research Report								

3.6 External Validity

Considering the peculiarity of the study to COSATU and NUMSA, the external validity cannot be generalized in all labour movements or trade union affiliates as there could be differences from one union to another. The views presented in this report were unique to COSATU and NUMSA and may not be a representation of the responses to green jobs by all trade unions in South Africa.

3.7 Summary

This chapter presented the methodology of this study. The study reported the design, population and sample size, sites and context, methods of primary data collection like interviews and focus groups discussions. Notes were taken, transcribed and analysed using words while secondary

study used content analysis of data in documents. The data processing methods and analysis was defined and how access was granted and ethical issues handled have been outlined.

The next chapter looks at the Labour responses to the issues of green jobs.

Chapter 4: History of COSATU and NUMSA

4.1 Introduction

The report shows the history and political organisation of the labour movement in South Africa. It then looks at the formation of COSATU and NUMSA and their tactics and ideologies that inform their decision making processes. It makes reference to political and social movement unionism which are characteristics of the trade union movements under study. It also shows the history of NUMSA highlighting legacies, debates, context and strategic decisions that have shaped the union. Noteworthy are the union's ideologies, strategies, tactics and the influence of its traditions in discourse. It also identifies internal management of NUMSA's diversity emphasizing the union's innovativeness with regard to green jobs. The findings are outlined according to the aims and objectives of the study. After this the initiatives that NUMSA is undertaking are presented. Development of ideas in the two labour unions leading to the 'Just Transition' is then highlighted.

4.2. The Rise of Unionism in South Africa

According to Du Toitt et al (1976), trade unions are defined as the way a group of workers within a firm or industry work together to coordinate industrial relations between them and their employers. This organisation is permanent in nature and is created by workers themselves so that through collective bargaining they can protect their jobs and improve working conditions. It is through such organisations that workers are able to demand better livelihood and articulate their views on community matters.

The main concerns of trade unions are to address economic, social and psychological wellbeing of workers hence the union is seen as a social organisation. Trade unions have their own constitutions which provide among other things for protection and promotion of wellbeing of

workers, improvement of working conditions and help to settle disputes. It is mainly the members who are the main stakeholders of the organisation and these form branch structures responsible for the running of the organisation. From the trade unions branches, a national union emerges which is responsible for the implementation of union policy nationwide and it is from there that the executive committee is elected.

The history of workers in South Africa especially among black workers is one connected to the struggle for racial and national liberation. Trade 'unionism' and 'socialism' begun when white workers across the world came to Southern Africa in search for opportunities in areas where diamonds and gold were discovered. The majority of black workers faced repression and ended up being labourers in white owned mines, factories and farms. Some workers came from Asia and parts of poor Europe and these later joined black workers to fight for better wage and working conditions.

4.3 The First Trade Unions in South Africa

Until 1850s the interest to form unions was limited as there were only a few industries in South Africa but industrialization and economic development started when diamonds and gold were discovered. This is when the idea of trade unionism begun to take root and foreign workers arrived in South Africa who brought with them both 'home unions' and militant ideas. These played a crucial role in the formation of African Unionism and had a belief that politics was the way to achieve workers objectives peacefully.

By 1881 the first union the Amalgamated Society of Carpenters and Joiners of Great Britain was formed in Cape Town, Durban and Johannesburg, South Africa and later on other unions begun to emerge. The growth of the economy and increasing in new factories helped the growth of

union membership yet the loss of confidence in unions by members and establishment of industrial councils slowed this growth.

The Mass African unionism started in 1919 by Clement Kadalie who was seen as a natural leader from Nyasaland now Malawi when he formed the Industrial and Commercial Workers Union of Africa (ICU) in Cape Town. ICU was a mass political movement with an expanded mandate beyond workplace issues and its membership was open to both workers and the communities (Du Toit et al 1976; Friedman 1987). The union grew under the environment of strikes as workers protested for better pay and working conditions and members depended on the union for advancing workplace and community problems. However by 1930 the union was weakened by government's repression of its leaders and use of racial laws like 'Pass Law' and Native Administration Act which made unions to lose their bargaining power (Friedman 1987). Internal issues like resentments from unsatisfied members also contributed to the weakening of the union.

Historically, from 1920s citizens in South Africa have shown desire for change and unions continue to encourage workers of the power in their numbers to change things, find dignity, self-respect and self-confidence. This was seen to be achieved through organizing, democratic control of decisions by members at all levels and acting together like organizing a mass work stoppage. Strong workplace unions have helped to affect the politics in the black township. Because apart from the workplace challenges, unions like communities are now faced with new challenges which now require new forms of responses beyond resistance to formulate alternatives. This calls for the need for unions to look beyond the workplace issues in order to gain the support of the communities (Friedman 1987). Ideas by scholars like Friedman started influencing unions in South Africa to look beyond workplace issues especially those affecting workers and the communities at large. Unions needed to expand their functionalities beyond the bread and butter

issues in the workplace to incorporate community concerns (Du Toit 1976). This could be regarded as the starting point for trade unions' involvement in environmental issues in their communities leading to the Just transition.

The Communists begun to recruit members from the industrial sector but was overshadowed by the Committee's union which was more of a White union as it received financial support from and cooperated with the government. This cooperation later became a threat to members' control of their unions and its bargaining power. As a way of controlling the union, government constantly praised the union in public and encouraged workers to join but union saw this as an opportunity to increase membership. Eventually unions started to rely on the wage board to advance their demands which later became a dictator of union's strategies, reducing it to a professional advice office.

A more militant union, the Council of Non-European Trade Unions (CNETU) emerged in the 1940s with almost 40% of Africans working in the commerce and industry sectors. The demand for African labour during the war enhanced the union's growth and bargaining power. The union leaders became critical in the black resistance politics as most of them later became political leaders. But the union fell after the war with the rising of the African Mine Workers Union who called for a strike for recognition but ended with police force that left 12 people dead and more than 1000 wounded. The banning of the Communist Party weakened its unions but later actions by CNETU itself brought its down fall as it begun to ignore its militant ideology of a Communist nature. Membership fragmentation and lack of factory resistance power also weakened the union.

In 1955, South Africa Congress of Trade Unions (SACTU), an alliance of independent unions and all races was formed and later joined with the ANC. SACTU believed that joining the

political alliance would help them make gains in the factories and resist racial laws. But the government used laws like the Bantu law to repress the unions and this forced unions to use unofficial channels. The union won factory gains in key industries which gave it a stronger power base than the previous African unionism. But the union was forced to fight political battles in an unequal alliance which hindered workers independence to set its priorities and control their lives and communities. However by the 1960s, the union's crackdowns and internal politics weakened SACTU.

During 1960s and 1970s workers in South Africa begun to organize themselves in mines, factories and shops where they were able to gain back some freedom to bargain with employers. Most times they used power of refusal to work in order to demand their rights and better conditions of services and the rate of strikes increased by 1984. Workers then begun to form organisations of 'unity for action' and although most of them were dismissed, these groups gained populace amongst workers which forced the government and employers to cooperate (Friedman 1987).

These worker organisations have been a force behind forcing government to draw labour laws and repeal anti-worker laws like the pension fund in 1981. These organisations have structures, constitutions, committees and councils which help them achieve the changes they get through democratic control of decisions by members. They also run education and skills training to empower workers in the knowledge of history, economics and politics which help them make better decisions. These unions have not just made gains but have become a household name despite the many challenges that they are faced with.

4.4 Unions and Politics in South Africa

Because of the nature of trade unions' objectives, they are also regarded as political organisations where its administration rests in the hands of the elected members. These organisations adopt the principle of majority vote in electing its leaders and adoption of resolutions and are mostly democratically run. Political activities become essential in trade unions as a result of power struggle between workers and employers or the state. According to Du Toit (1976), politics became a character of British trade unions in 1893 after the formation of the British and Independent Labour Parties. While in America, unions are part of political parties and they influence election and political decisions.

Political power is also used in unions to maintain the stability of the organisation but seeking political affiliation forces the union to favour certain political parties and can end up being used to amass power and gain votes for the party. In South Africa, unions learnt lessons of the undesirable effects of participation in politics during the strikes of 1913, 1914 and 1922 and today the COSATU which is a federation of over 22 affiliates engages in political Alliance with ANC and SACP.

From 1980 the South African government begun to coax the registered unions to woo against their rival 'non-political' unions which resulted into the formation of an alliance between the political groups and the unions. This made unions to be in the spotlight where politicians could not undermine them and this was seen as a move for a political change. However some unions rejected the political alliance as they saw it as 'home-based' and conservative but because of their weak position they could not resist so long as they maintained their independence. Still FOSATU expressed fear that joining political parties would weaken its workplace strength and that workers interest would not be pursued better within the political alliance. The union realized

that apart from racial challenges they were also fighting for economic equality which would be compromised should they join the political alliance. FOSATU's vision was to see workers controlling those in government position and backed those unions which fought for workers independence both at work and in the communities (Friedman 1987).

FOSATU made a resolution to form an 'independent working class movement' that would assert the workers control of their destiny and demand for leaders to serve their interests. This would enable the workers and the communities to have a democratic control over their leaders. FOSATU insisted on the need for workers to be in control despite joining any political party and that the alliance should allow workers to have both practical and theoretical control. However, the internal pressures and politics posed challenged to this assertion. By 1983 the United Democratic Front was formed to fight against government policies and revive the Freedom Charter which was adopted by the ANC in 1955.

For the political survival of the trade unions to be realized, there is need for unions to forge alliances and consolidate the union activities within the communities. Again, trade unions should aim at creating a society in which workers and the communities have power to control their lives in order to achieve full democracy in factories and townships. In order to achieve democracy, there is need for worker training and accountability for leadership who always engages with workers and makes room for member participation in decision making processes. When unionism takes it root in the factories it has high chances of succeeding and members gain the pride of controlling their lives, goals and their voices heard through negotiations (Friedman 1987).

However independent trade unions have taken up the issues of their relationship with community and this marks the beginning of new types of unionism in South Africa. This involved building up of shop-floor strength to gain recognition, organize and bargain with employers on wages and conditions of service. During the 1970s unions concentrated on workplace issues than politics arguing that engaging in political struggle may only destroy the unions (Hindson 1987). It was the township strikes of 1976, the changes in the industrial relations and reforms for urban Africa that brought to light the involvement of unions in political issues as community protests without organisation did not yield results.

The union-community alliance started in 1976 in the Western Cape when the unions and communities supported each other during protests to which FOSATU disagreed to seeing it as a means to lose working class leadership and direction. Instead there were suggestions of a working class movement which would defend worker's interests and ensure their interests were not subordinated to a political party that comes into power even though the union would support community campaigns (Hindson 1987).

With the formation of UDF in 1983, unions like the South African Allied Workers Union SAAWU and General Workers Union (GWU) decided to affiliate to the party. Again the split of Metal and Allied Workers Union from FOSATU forced the leadership to review its decision of non-affiliation to political party as it risked losing membership to the organisations that were willing to take up grievances beyond workplace issues.

4.5. The History of COSATU

COSATU was launched in 1985 with the aim of opposing Apartheid and a commitment to non-racial and democratic South Africa and currently has about 2 million members. In an era of declining union membership, COSATU claims to be the fastest growing trade union in the world

and continues to grow. Its main objectives are to fight for the improvement of conditions of service of workers, organize members and ensure shop-floor control through participation of workers in decision making. Its principles are based on non-racialism, worker control, mass organization of paid-up members and building solidarity with international workers.

COSATU is a member of the tripartite alliance with ANC and the SACP as a revolutionary alliance that emerged after the unbanning of political organisations in 1990. The resolution for joining the alliance was made during its 6th National congress as the only way to bring fundamental changes based on the RDP to South Africa. The three parties are independent but both COSATU and SACP believe in socialism. As a federation representing workers, COSATU is also a member the National Economic Development and Labour Council (NEDLAC), CCMA, Global Unions, Job creation Trust and Labour Start. Internationally it is linked with ITUC, OATUU, ILO, ITF and ICEM with which it has built solidarity and membership.

COSATU adopted a radical reform agenda characterized in SMU which uses protest and negotiation to enforce changes in the work place and economic decision making. It was this pressure that brought about the formation of NEDLAC; a forum where social partners discuss social, economic and labour issues before they are presented in parliament. COSATUs vision of transformation is found in the Reconstruction and Development Programme (RDP) which focuses on inclusive, participatory and transparent policy making process and implementation.

According to email discussion with Prof J. Cock, the move to embrace the Just transition in COSATU was born out of the realization that the working class is most affected by the increase in extreme weather events such as droughts and floods caused by climate change which results in rising food prices, water shortages and economic dislocation. Prof Cock also noted that trade

unions have come to realize that the working class is most affected by unemployment and any displacement in carbon intensive industries. She reiterates that as a starting point, a small group of people from environmental organizations and representatives from all COSATU affiliates were involved in the Naledi/Cosatu Reference Group on Climate Change. These activities and personalities were key and led to the birth of the Million Climate Jobs Campaign.

4.6 Legacy and Structure of NUMSA

Metal and Allied Workers Union (MAWU) was formed in 1973 in Pietermaritzburg, and operated as an independent non-racial union. The combined recruitment of all races enables MAWU to expand across Transvaal and although it faced opposition it managed to win fights for recognition at many workplaces. MAWU established relationships with International Metalworkers Federation (IMF), National Union of Motor Assembly and Rubber Workers of South Africa (NUMARWOSA) and United Automobile.

NUMSA was formed in 1987 as a result of a merger of four unions; MAWU, MICWU, NAAWU and UMMAWOSA and other two COSATU affiliates, GAWU and TGWU. These were unions from different racial and geographical backgrounds which resorted to form one union to restore the unity and strength of metal workers. Currently NUMSA has over 300,000 members, majority of who are semi-skilled. Its main objectives are to safeguard workers' rights, democracy, solidarity, human development, safe working conditions, financial control and legal assistance for its members (NUMSA 2009).One of NUMSA's structures is the shop steward council which is responsible for advancing the interest of workers and the communities within its jurisdiction. Its constitution provides that the union funds can be spent on implementation of its policies (NUMSA 2009).

4.7. NUMSA'S Ideologies and Tactics

NUMSA is one of the biggest affiliates of COSATU, a federation which is known for its large base of membership in Southern Africa with over 2 million members (COSATU 2011). As a member of COSATU CEC and sub-committees, NUMSA is able to influence policies in the best interest of metalworkers at federation level. Internationally NUMSA is also affiliated to World Federation of Trade Unions (WFTU), Industri-ALL and International Trade Unions Confederation (ITUC).

NUMSA was formed as a result of combination of four unions including Metal and Allied Workers Union (MAWU) which was formed in 1973. MAWU believed in the worker power as a source of meaningful change and organized workers across all races of which black people were a majority. Unlike other unions like SAAWU which focused on political unionism, MAWU believed in factory based power and development of class consciousness from which solidarity could be formed with other unions locally and internationally. MAWU organized workers from the factories and elected its leaders from the members who would form a committee. The structure of the union up to National Executive Council was formed from the shop-floor leaders. The uniqueness of MAWU was that National leaders had no decision making mandate and all factory leaders at each level were accountable to their members. Despite concerns over the large number of white intellectuals on advisory council, these intellectuals helped to provide mostly voluntarily their skills, information, resources and education to the unions.

MAWU faced challenges with employer recognition and this affected its ability to deliver to its members in terms of better working conditions and wages as it was not possible to negotiate with the employers. Again the lack of strong factory power and employers wooing for liaison committees made it difficult for the union to grow its membership base. The union then came up

with a strategy to consolidate its power by electing shop stewards from the factory who will be accountable to the members. These shop stewards would bargain with management and also conduct meetings with factory workers to enhance participation. MAWU also having learnt from SACTU's loss of independence through its alliance with ANC decided to use political independence as a survival strategy. However, by 1977, employers begun to refuse union recognition and the unions faced financial challenges together with the banning of officials and police brutality. These caused the union to come up with the new strategy of decentralization and consolidation of membership in a few factories. MAWU also decided to focus on organising big and mostly foreign companies which were less likely to resist unions than smaller factories.

NUMSA believes in organising members based on non-racial, non-ethnic strategy across the industry. It also constructs a high degree of democracy and bureaucratic power to support its organisation and bargaining activities. NUMSA uses the model of 'workerism' embedded in worker power to influence political and economic outcomes (Forrest 2005). Gramsci's belief was that factory council will allow workers independence and the development of political and administrative leadership. He also believed that educating the elected leaders will prepare them to exercise bargaining power for a better wage and condition and will eventually take over the factories.

From the 1980s NUMSA has built its power through worker control and union independence from political parties in order to improve its members' working conditions and effect economic changes. It chose to accrue its power through factory structures and the practice of democratic accountability. Its decision to work with the communities and other political organisations also helped with the building of its strength. The union has built bargaining councils and hegemony in the industry and in 1993 it made a resolution to restructure the industry during the period leading

to democracy. But tensions rose between members whose interest was wages and leaders who were focusing on changing the industry, improving worker's skills and strengthening worker control. Politically this hindered the establishment of its socialism claims despite being part of the new democracy as the state prevailed and weakened the union. When NUMSA developed the Reconstruction Accord which became the Reconstruction and Development Programme, chances of its implementation became slim (Forrester 2011).

Despite these challenges NUMSA has maintained its independent position within COSATU even though the federation joined ANC/SACP alliance which has caused labour to lose its militant, strategic and ideological focus.

4.8. Strategic Decisions that have shaped NUMSA

NUMSA organizes its members from engineering, motor, auto/tyre and electronic sectors regardless of race and political affiliation. Since its inception NUMSA has served both organized and non-organized workers' interests including people of the black community and many employers (Forrest 2011).

During the period trade unions started developing policies and strategies to fit into the democratic new South Africa, NUMSA begun to shift its strategies towards radical "strategic unionism" mainly on human resource, institution and industrial development. NUMSA promotes internal debates and research in coming up with new strategies whilst being proactive in discussing challenges, possibilities and responsibilities over the formulation of economic policies. The union's working class strategy is one of industrial restructuring and economic development through strength and conscious organisation and shop-floor control in a move towards socialism (Von Holdt 2000).

NUMSA was at the helm of developing the RDP as a Reconstruction accord between the ANC and the labour movement. The union also adopted a new bargaining strategy which included industry's grading, training, development of skills and wages to move from a racist system and narrow the wage gap. NUMSA also uses negotiating framework agreement to reform the workplace programmes like skilling and training, upgrading and promotion based on new skills acquired. However, most of NUMSA's strategies fail to take root at shop-floor level as it faces management resistance and shop stewards lack of direction as most are overwhelmed with other political activities outside the workplace. Developing proactive strategic vision has been an important element in implementing the union's political reconstruction (Von Holdt 2000).

NUMSA claims to believe in social movement unionism, a term whose objectives are mass mobilization, internal democracy, broad social objectives and forming alliances with progressive social movements. It also asserts its independence from political parties and recognizes diversity of membership. NUMSA has proactively negotiated a transformation of their sectors to become competitive through policy, skills development, training and multi-skilling of workers (Hirschsohn 2007). NUMSA has built its SMU using a 'from the bottom up' based on member control and shop-floor democracy. Its strong independent vision has placed it as a pace-setter in COSATU. Its structure entrenches union's presence in the workplace as shop stewards are elected workers hence able to easily channel the members' concerns to the employer. Grass-root democracy and periodic strikes are synonymous with NUMSA's tradition of militancy and radicalism. The union also believes in constant communication and feedback between shop stewards and members at the workplace (Hirschsohn 2007).

NUMSA is one of the largest industrial unions that support COSATU's principles of worker control as a critical element to its uniqueness. The decades of experience of struggle in the auto

plants brought about a combative, militant movement with strong legacy of worker control culture and participatory democracy which gives it potential for mass factory level mobilization. Social-political issues are important to NUMSA's activities and its members are individually committed to act through their union to enforce action against the state. This supports SMU's agenda for social, political and economic transformation although this may be hindered with the union's affiliation to COSATU which is in alliance with the ANC government. According to Maserumule, the idea of trade union independence in NUMSA started around 1980s as unions like MAWU believed in class struggles as a fundamental aspect of trade unions. In 1993 NUMSA made a resolution to break the alliance soon after attaining democracy in order for the trade union to maintain its autonomy as it realised that it would be difficult to align with the ruling government no matter how progressive it might be. This thought was rejected by COSATU but again NUMSA made a resolution in December 2013 during its congress to move out of the alliance between COSATU, the ruling ANC and SACP. While NUMSA resolved not to leave COSATU but instead campaign to win over the federation to its positions by the time it convenes its next congress in 2015, the current leadership of COSATU may feel tempted to expel NUMSA which is one of the federation's largest affiliates (Pillay 2014).

NUMSA's political theories are influences by the Italian Marxist Antonio Gramsci and South African Political Scientist Rick Turner who envision Marxist concept of union as striving to change the world. Gramsci was a unique socialist who sought the views and involved workers and unionists and decided to use factory grievance committees in dealing with workers' concerns. He believed that workers' councils were the foundations of worker democracy and power (Forrest 2011). Gramsci envisioned independence councils which would elect their leaders, educate their members and eventually take over the factories. The councils would

embrace class consciousness which would be led by the communists and its influence would expand towards helping socialize the industry.

MAWU, NUMSA's predecessor supported the Gramsci ideas because its socialism was more practical, its power was based on worker control and it rejected the bureaucratic union leadership. MAWU like NAAWU where NUMSA originated from also supported the skilling of its shop stewards and building of strong shop-floor structures. It also formed local community committees and followed Gramsci's emphasis on education as a basis of leadership development. However, NUMSA only embraced the rank and file engagement and building of national power but did not form a socialist party which would mobilize workers for political power. The main focus of NUMSA was 'syndicalism' which became to be called 'workerism' influenced by Gramsci and Turner (Forrest 2011). For Turner, work place played a central role to an individual's life and controlling it would strengthen democracy although he saw unions as weak to occupy such a role.

From 1993 onwards NUMSA seemed to have immersed in political unionism as it stopped being independent after the resolution for independence was defeated during its congress. This was the time after Polokwane when it seemed like NUMSA was divided amongst itself with some members supporting Mbeki, others in support of Zuma whilst yet others maintained their independent assertions (Maserumule personal interview 2014). This was like a dark period for NUMSA but people like Dinga Sikwebu who had lost the position of General Secretary by a few votes during congress were part of the faction that advocated for union independence. Around 2001 NUMSA lost its SMU to political unionism due to these factions and this went on until the Polokwane saga when the Zuma faction took over.

However, it was only after the change of leadership in 2009 led by Irvin Jim that Dinga was reinstated, working with the new leadership as Education Officer who started advocating for the advancement of the green initiatives. During the interview with Maserumule, his views were that Dinga availed himself on strategic position ahead of time even though he was relatively new to the union but he had managed to earn the trust and confidence of his superiors. To him, Dinga had well formulated issues as he was able to pick up the issues of green initiatives more seriously from his predecessors A Erwin and B Fanaroff who during their time in office were NUMSA's think-tanks which might have been a threat to others although they may not have been the only ones.

In most cases as it became clear during the study, union political leadership seem not to take the issues of green jobs initiatives seriously. Obviously, had Dinga not lost the position of General Secretary in 2001, NUMSA would have started promoting the green jobs initiative long ago as through the Education Department and NUMSA's RDG the initiatives have been progressive. According to Maserumule, the other advantage for NUMSA was that Dinga re-joined the union at a time when green initiatives had gained global momentum and he revived the role of strategic and political thinking known in NUMSA by picking up the green jobs initiative as a dominant union agenda. Dinga had understood the challenges, dynamics of the industry and how ruling issues of the moment like the green jobs could find its way into union's agenda and was able to take them back into the union's semi-industrial policy. This was a drive to combine production pattern and environmental issues and build workers and their structures into it through education and training by mobilising workers to become pillars of the green jobs agenda. To Maserumule, Dinga displayed intelligence, determination by strategically going beyond the old approach of

skills development which started by his predecessors but who had not taken the green initiative seriously. He integrated them into NUMSA's campaigns and education programs.

In 2012 NUMSA embarked on programs of education and action towards what is called 'Socially Owned Renewable Energy' projects following its congress resolution and taking from the federation's resolution. NUMSA may have been interested in these green initiatives due to both its structural advantage as well as individual members like Dinga who showed passion for environmental issues. This interest also came about as NUMSA gradually returned towards SMU with a proactive, innovative and independent mind. It was possible to attain these strides considering that the union has more members than other unions and the members are better educated, able to articulate economic issues and easily relate with environmental issues. NUMSA is also strategically located within the production line and has an advantage of being the largest union unlike others. This is not so in other big unions like NUM who despite having large membership remain conservative and keep shifting their position on environmental issues, preferring the minimalist approach to the issue (Cock 2012). NUM seems dormant within the mineral energy complex and narrows its focus on environmental issues despite its claims of anti-nuclear stance. It is so imbedded in alliance with more support on political than social movement unionism which hinders its capacity for independent thinking as the government it supports intends to increase its nuclear targets. Currently, according to Maserumule, NUM lacks capacity to articulate green jobs initiatives and is also facing a lot of challenges within the mining sector which affect its ability to tackle climate issues. The question remains as to whether NUM is making any moves to tackle these issues and trying to rebuild itself up to get out of its current situation.

In 2013 NUMSA noted that the alliance had become dysfunctional as it was dominated by internal politics and factionalism and that the freedom charter had been abandoned in favour of the NDP. It also noted that the alliance was only used as a voting folder for the ruling party and no longer worked in the best interest of workers and the failure of the labour's strategy to swell the ranks. ANC had asserted its hegemonic power and used the alliance to rubber stamp neoliberal policies. Therefore, NUMSA demanded that COSATU breaks from the alliance and it also proposed the formation of a United Front similar to the UDF which would coordinate workplace and community struggles through what it calls 'Movement for Socialism'.

4.9 Summary

This chapter focused on historical events pertaining to the trade union movement in South Africa. It looked at the rise of unionism and how the first trade unions were formed in the country. It also focused on how the union has been involved in politics. The history of COSATU was briefly discussed and then the legacy and structure of NUMSA were also looked at. The report then showed how the ideologies and tactics of NUMSA influence its strategic decision making.

Chapter 5. South African Labour's Responses to the issues of Green Jobs: The Case Study of COSATU and NUMSA

5.1 Introduction

In this chapter the study focuses on the labour movement's responses to the issues of green jobs using COSATU, the largest federation in South Africa and NUMSA its affiliate. The report first looks at how both leaders and members of the trade union understand the concept of green jobs. It then looks at how the issue of climate change which is central to green jobs is having an impact on both the workers and the communities and check whether the impact is being recognised by them. The chapter also looks at how COSATU and NUMSA are responding to green jobs and assesses the level of responses as to whether they are adequate or not. It also considers the federation's approach to determine whether the responses are aligning to other cross-cutting issues of green jobs.

The other areas the study looks at are the political, social and economic constraints that the labour movement is facing in its attempt to address the issues of green jobs and how it is responding to those constraints

5.2 COSATU's Understanding of Green Jobs concept

The study found out that both union leaders and members understand green jobs as jobs created from a shift from fossil fuels energy towards more clean energy. The shop stewards interviewed also see the concept of green jobs as a gradual introduction of renewable energies and reduction of mineral energy whose implementation can have an impact on employment as jobs may be lost especially in semi-skilled workforce. For example a NUMSA shop steward said,

"we need to move from the dependency you know of fossil fuels to more cleaner energy but that comes also with a price in the sense that our country is entirely dependent on oil and coal for producing electricity" (Participant 10 NUMSA Jhb 3/8/14)

And regarding the shift to low carbon economy, the participant said:

"It needs to be introduced gradually because like for example in the mines the base load the RE can't carry that base load. They are forced to use the so called dirty energy but we also take into account the jobs that are there and turning into renewable energies like am saying needs to be gradual. If we can just want to implement it tomorrow, that will cause massive job losses"

However, a COSATU Officer expressed concern that South Africa has no capacity and technology to manufacture Renewable Energy technologies which are crucial to the implementation of green jobs. For example the COSATU Officer said:

"Our country in our view must develop programs and policies to support local technological advancement for the expansion of the RE sector. Because we know that whenever we get technology from overseas and so forth the cost becomes too high and that's for us a big problem". (Participant 1 COSATU House 14/7/14)

Another participant from Greenpeace said:

"…Independent Power Producer Procurement Programme which is supposed to drive the new Renewable Energy sector and some of the companies have applied to the government to allow them to import skills because there are no skills in the country. So we are concerned that off-course that is bad because that means you don't expand employment in the country itself

which is quite important and it also contributes to skills deficits in South Africa". (Participant 5 Greenpeace 10/6/14)

There are also fears within the unions in energy intensive sector that the introduction of green jobs may disrupt employment in their sector and they advocate for a gradual transition of employees into the green sector.

The manufacturing sector is where the environmentalists and trade unions expect that more permanent and decent jobs would be created. However, capital does not envisage business and economic viability to manufacture small volumes of RE component since government has allocated a small percentage of energy production to come from renewable energy. Instead those contracted to do the renewable energy projects prefer to import these parts than to manufacture them which hinders job creation. This is what an Officer at Greenpeace had to say:

"The manufacturers said well this is all government is giving us so it's all we are going to give them. Had they said we are going to allow the RE in a policy that is going to allow the feed and tariff what would have happened is you would have seen the manufacturing plants being developed in South Africa because now it's worthy your money. If it costs you millions of Rands to set up a manufacturing plant and you know that there is only so much on solar; there is no business incentive there for you to start manufacturing solar panels in this country because after that there might be nothing else right? So as a business you are looking and saying this is short term right and now it's cheaper for me to import them from Germany or china or somewhere else". (Participant 5 Greenpeace 10/6/14)

According the literature reviewed, the government's Integrated Resource Plan to increase nuclear energy and coal-powered stations overlooks South Africa's natural renewable resources and the

opportunities to manufacture renewable energy technology. The country could reduce emission whilst creating jobs and sustainable development without building new nuclear power stations. The government uses the 'Growth without Constraints' to develop its climate and energy policy although it does not represent real development path. Only 1% of SAs energy comes from renewable energy like hydro, biomass, wind power, solar PV,CSP and solar water heaters although it could supply 30% by 2020 (Winkler 2007).

However the challenges are still large for unions to take the impact of climate change and make the need for more green jobs seriously. There are other views from the economists within labour that green jobs can be created alongside high carbon economy energy scheme and there is need to combine environmental issues with economic and social politics of South Africa. For example, an Economist at Wits University explained that:

"Our strength is coal yaa, these renewable sources of energy the technology still resides in what you call imperial centres yaah. So when it is the opportunity now for countries in the south to industrialize on the basis of their own resources then you lift the bar again you know……., the global population must acknowledge that the western countries industrialized on the back of the coal based eem environmentally destructive path right? And these new emerging countries, they have to use their resources. Even if it means they will continue to emit carbon but (with emphasis) it must be with a view to broaden development and side by side making accessible new technologies. Because it's not going to be possible for Africa to industrialise without coal industry yaah I mean without the fossil energy." (Participant 7 Wits University 3/7/14).

Views from labour and the academia are that the issues of climate change are being perpetuated by developed countries in order to slow down the advancement of the developing countries. They express concern with the hegemony by capitalist nations over renewable energy technology and manufacturing and think the green economy may help the capitalist class to accumulate more. The issue of climate change has come about because of the capitalist nature of overproduction which has exploited both labour and environment and necessitated the introduction of green jobs. This is the 'green wash' capitalism what was a compromise made by Brundtland Agreement to ensure a balance between ecological sustainability and economic growth in which accumulation and growth are achieved at the expense of the environment. But Karl Max (1887) reiterated that private ownership of resources needed to change if real sustainability was to be achieved.

According to ILO/UNEP et al (2008) definition of green jobs, these are decent jobs created with the aim of preserving the environment in all sectors including industry, agriculture and administration. These are jobs that will lead to environmentally, socially and economically sustainable economies through reducing usage of energy and raw materials, limiting the carbon emissions whilst protecting and restoring the eco-system. The concept of green jobs can include restructuring the organisation and production processes using technologies that will lessen the negative impact on the environment. In implementing green jobs, the economic activities should include those that promote the prevention of environmental degradation and preservation of natural resources from depletion. Cock (2011) has defined green jobs as jobs that "protect the ecosystem, biodiversity, reduce energy material and water consumption with effective strategies and de-carbonize the economy whilst minimizing or avoiding production of waste and pollution".

The understanding about the concept of green jobs for leaders and workers of the union shows that they are still shallow within the labour movement. While at leadership level there seems to be some understanding of the concept a number of respondents at shop-floor level seem to confuse between the green jobs concept and the just transition definition which is being advocated by the labour movement worldwide. However, other respondents within labour express fears of job loss especially in semi-skilled and labour intensive industries during the transition towards a green economy. As a COSATU Officer said:

> "But the tension that's within the affiliates is obvious when you say you want to move to a low carbon economy, you are talking about restructuring the economy. So developing Renewable Energy instead of relying too much on energy generated on coal it means automatically that some workers might have to be moved towards RE sector. Others might be displaced so you need to find a way of matching it. And that is something that we debate on how we manage the transition to a low carbon economy". (Participant 1 COSATU 14/7/14)

The challenge with different levels of understandings can cause the issue of green jobs to become an incidental issues without being given due attention for implementation. Again if the issues of green jobs are combined with fears of job loss, it may cause workers to ignore the concept or just talk more and do less about it.

One environmentalist from Greenpeace lamented that government needs to increase the allocation of renewable energy to show that they really understand and appreciate the significance of renewable energy to the economy. In her view, South Africa can lead this transition for the continent as renewable energy will develop a green economy which will

provide green jobs to its citizens. Early skills development will ensure availability of workers who are ready to produce low carbon, low risk future via the just transition towards renewable energy. With political will and abundant renewable resources, South Africa can become Africa's leader in renewable energy.

Job creation is a key priority for South Africa and green sustainable jobs will enhance the green development and shift the labour market whilst facilitating a just transition from fossil fuels toward renewable energy. The Green Jobs Joint Initiative by UNEP, ILO, IOE and ITUC focuses on skills for green jobs' qualifications in creating decent jobs within the clean energy. These green jobs' skills can be done through identifying relevant renewable energy professions, analysing skills gaps and training needs, setting up qualification paths to fill the skills gaps, employing, promoting and developing low carbon economy professions. Government, labour and the business through the NEDLAC could also begin to tackle the issue of green jobs and set the time frame when the transition can begin to take place. This may help to address any unfounded fears among workers which may cause social unrest and more destruction to the environment through industrial actions. However, the idea of decent and sustainable jobs did not come out clearly. Almost all informants mentioned job creation and job loss but none pointed out the potential of green jobs to create decent and sustainable employment as demanded by the one million climate jobs campaign.

5.2.1 The Impact of Climate Change on Workers and Communities

The impact of climate change on jobs will be both direct and indirect as some jobs will be created while others will be lost as a result and it will be mostly the poor in developing countries who will bear this blunt. COSATU calls upon government to ensure that skills development and training should match demands in the renewable energy sector. This can be done by putting in

place policies that will incorporate the development of skills in green economy and climate change. Both workers and leaders of the union envisage that the importation of renewable energy skills and technology as a result of climate change may create tension within the labour industry as it will not expand the local employment but increase skills deficiency in the country.

From the findings, it seems that there are also fears among workers that the introduction of green jobs may threaten jobs in the energy intensive sectors. These workers, especially in the energy intensive sectors see that despite the increase in energy generation in fossil industry, there is no corresponding increase in the employment creation. However, the study also found out that government does not include the Ministry of Education which is responsible for skills development and training in its energy matters as confirmed by the officer in the Department of Energy who demanded anonymity said:

"It's too early to engage the Department of Education but we are working with DTI on social economic impact study. We are trying to identify different technologies, jobs associated with them, skills required, localization potential and making recommendations. IEP makes recommendation on technology implementation plans and relevant policies to enable implementation and then the Department of Education can take it up from there". (Participant 3 DoE Pretoria 2/7/14)

Again according to the data collected, it seems that some communities do not show much concern of the impact of climate change as they fail to appreciate the link between climate change and the social economic challenges that they face. Much as they face issues like water shortages, and food and energy price increases, they attribute these to poor administration and corruption rather than climate change. Again the issue of climate change is seen as an elite

subject that does not speak to the community's challenges. This is what one participant from COSATU Research had this to say:

"What happens is that because of inequality people in South Africa are worried about the basics….. so when you bring Climate Change they don't understand the causality or the correlation between Climate Change and the social economic challenges that they have got. ……. They just look at it as administrative and corruption issue; yes it is but deeper. There is also an ecological element to it….. the issue is seen mainly as elite subject,….. too technical. It does not speak to people"(Participant 2 COSATU 14/7/14)

According to environmentalists like Earthlife, they think that workers are not appreciating the real impact of climate change and see it as something that may not happen or if it does, it will not be in the near future. For example one participant at Earthlife explained that:

"I do know that at shop steward level they think that a green job is something way out there. Something that will never happen or it's a kind of a pipe dream, very unrealistic……. But eeh the challenges are still large. They really don't want to take it on". (Participant 4 Earthlife 30/7/14)

However, the literature reviewed on the impact of climate change on employment indicates that climate change will affect workers in sectors like energy, water, transport and agriculture but the impact will vary depending on the geographical location like coastal regions and cities. This will force people to migrate and bring disruption to livelihoods even when the real impact is not easy to predict (Scott 2014). Urban migration will put pressure on the job market as well as concentrating climate risks especially in the coastal regions. However whilst these sectors also contribute to climate change through the emission of greenhouse gasses, adaptation and

mitigation measures such as renewable energy and energy efficiency can create opportunities through upgrading of skills. The creation of new jobs needed to tackle and adapt to climate change may include renewable and decentralized energy production, construction of resilient infrastructure to maintain economic activity and the shifting of agricultural activities to other areas (Scott 2014). Mitigating climate change will require new skills hence the need to upgrade workers to be able to fit into the green jobs sectors like renewable energy, decentralized and energy efficient economic sectors. The energy sector as the largest emitter of greenhouse gases faces challenges of delivering energy services with low emission. Increasing efficiency and behavioural change from where energy power station are situated to the end user can improve mitigation whilst increasing use of renewable technologies and carbon capture and storage.

This shows that the issues of climate change affect both workers and the communities in the sense that changes in the environment affect food production and pricing. Other literatures have shown that climate change is increasing drought conditions in the southern hemisphere and rains are causing floods in most parts of Africa. The change in weather conditions is impacting on crop yields and food prices as alluded to by some scholars like Cock (2012) who also sees the crisis to be 'deepening'. However, the shop stewards and communities do not link the issues of increasing food prices, water shortages and high energy costs as a result of climate change. If they saw it that way, they would compel government and their unions to take concrete action. As far as the government is concerned, it still needs to implement policies that are taking care of environmental, economic and social issues. Economic issues can include policies that will ensure increase in energy access and decentralization of energy. Government can also ensure that there are provisions within departments that will provide for access to skills development and training on green economy. To ensure that the communities get involved in the issues of climate change,

there is need to simplify the issue of climate change so that the ordinary citizens can understand and begin to embrace it.

5.3 COSATU's Responses to Green Jobs

The study was conducted to examine the extent to which COSATU was responding to the issue of green jobs. This report also highlights whether the measures being taken are adequate to effect changes or not. It considered the cross-cutting aspects of green jobs and determined how COSATU was approaching this through analysis of the federation's responses and interactions with other stakeholders like government and environmental organisations.

From the responses gathered, the study concluded that COSATU is now recognizing that climate change is a social and developmental issue and 'one of the greatest threats to our planet and our people' (National Congress Resolution 2010). It started showing commitment to tackling the issue as seen by the attendance of national office bearers at Durban workshop in July 2011 and the adoption of Climate Change Policy Framework even though, as Cock (2011) puts it, the contents are not clear. Recently COSATU has embarked on a series of workshops on climate change which involves affiliates, academics, environmental organisations and some government departments like the Department of Energy. The purpose of these meetings is to conscientize the affiliates to start taking up the issues of climate change with seriousness. The researcher attended at least three of these meetings during the time of data collection as a participant observer and found the debates enlightening and engaging as it gave exposure to the issues of climate change in more detail. It also became clear that the affiliates were showing that the issue was still new to them by looking at the low level of engagement. The responses from affiliates showed shallow understanding of the environmental issues and its impact to employment as well as how they can

respond to it. This shows that COSATU has a long way to go to entrench the issues of climate change to its affiliates.

Another initiative taken by COSATU was seen during the 11th COSATU congress in 2009 when resolutions were made to increase research capacity on climate change and ensure the working-class are involved to avoid turning climate change into another area of capitalist accumulation. From those resolutions, it was clear that COSATU is also against any means of accumulation that breeds inequality in the form of 'green capitalism'. Some of its basic vision and aspiration on the Just Transition are the creation of decent jobs (living wage, health and safety, and gender sensitive and secure employment) through environmentally friendly investments, establishment of comprehensive social protection systems, the conduct of research on the impact of climate change on workers in order to come up with better social policies and development of skills and re-training-re-qualifying of workers in preparing them to be part of the transition.

5.3.1. COSATU's other initiatives made so far

Currently the federation has formed two groups namely: the Reference Group on climate change and the National Climate Change and Environment Committee (NCCEC) comprising of affiliates, environmentalists and academia in order to respond to the issue of climate change. The Reference Group which started in 2011 is responsible for conducting research and giving technical support in form of training and workshops to the affiliates on climate change related issues. So far it has conducted research on the coal mine, chemical and poultry industries and has published a report on the findings which were adopted by the NEC as a working COSATU policy framework on climate change in 2013. On the technical support provided by the Reference Group, one of its members said:

"We do a lot of education especially on climate change to COSATU affiliates and we talk a lot about how climate change is having an impact on food prices..... You got to show that it's a relevant issue to working class people. And one of the reasons that food prices are increasing a lot is because of climate change ..... that is affecting food production and then the cost of fuel is increasing..... and also with industrial food system you have got a long food miles.....….. . And people can see climate change then as relevant to them. So we talk a lot about energy, food, water and land. That's the nexus of environmental issues" (Participant 6 Wits University 3/7/14)

However, there are several challenges that the reference group is facing. One of them is the fact that it is only advisory to the national executive committee as one of the group members explained.

" I think the problem in the Reference Group is that it is an advisory body. We don't have any policy-making or decision-making capacity; so are just there to advise" (Participant 6 Wits University 3/7/14).

The other challenge is that it is affected by internal politics between the officials of the union who are supposedly to be decision makers even though members of the group could not specify the nature of internal politics that was being referred to.

COSATU is also in the process of forming the National Climate Changes and Environmental Committee (NCCEC), whose main objective is to make political recommendations for COSATU's Central Executive Committee's approval which in between congresses is the highest decision making body on energy and climate change policy issues. The other objective is to coordinate research and policy work which all the affiliates are doing. The third objective is to engage the government on climate change related matters. This is done through inviting

presentations from government departments on National Climate Change policies of which the researcher attended three during the course of data collection. Again the committee synergizes the work that the climate change reference group is doing which is mainly to assist COSATU affiliates with regard to research and policy on climate change. NCCCEC is made up of essentially the affiliates' representatives and some members from the Reference Group. This has been found to be a better way of ensuring that timely decisions on climate change are fast tracked and followed up with leadership.

Like the Reference Group, the NCCEC also faces challenges in that it is only an advisory body and members of the group think that the CEC takes too long to make decisions. For example, a member from NALEDI said:

"Yeah it takes long to get decisions to be agreed upon that's why that thing I was talking about earlier that we need to try and attract more senior approval' (Participant 8 COSATU 1/7/14)

COSATU is working on developing the capabilities of its leaders and educators. One COSATU Policy Framework Officer explained,

"we want to develop internal capacity because we believe that if we develop internal capabilities of internal comrades they then can link the work to broader issue of class struggle…….. as long as they think climate change is an issue of the elites…., is a new issue on the agenda……. So you can only counter that by showing the people that the challenges of climate change is a class issue you see". (Participant 1 COSATU 14/7/14)

Looking at the responses provided, it seems there are still challenges within the labour movement on the management of the transition towards a low carbon economy. For example the

Federation indicated that it is still fighting for the localization of the manufacturing of components and training of the renewable energy sector in order to address the issues of decent job creation. The Officer also said,

"When we speak about the transition, it's not just a radical change. And that's why we are fighting for localization of manufacturing of components parts and training of the Renewable Energy sector. Because when you fight that, it's when you address issues of jobs….. [But again we are fighting to say for decent jobs (sic)]. You know because we don't want anybody to just be exploited" (Participant 1 COSATU 14/7/14)

The study wanted to find out if the initiatives, the thinking and the perceptions of COSATU leadership are filtering down to the lower hierarchies and the ordinary workers. The findings show that the federation's leadership and shop stewards have a different view of what the federation is currently undertaking on the issues of green jobs. The shop stewards that were interviewed claim not to see any initiatives that the federation is doing on green jobs and expressed doubts as to whether COSATU is prepared for the consequences of climate change. Others believe there is still room for improvement beyond policy formulation where the federation can offer alternatives to capitalism problems. This is what one NUMSA Shop steward explained:

"So with the issue of renewable energy, actually we can't say they are dealing with it. There is nothing that is happening at COSATU on renewable energy just to be honest with you". (Participant 10 Numsa 3/8/14)

Another Shop steward said:

"There isn't much in my own experience probably about what COSATU has done. I think they can still do more…… I don't think workers from COSATU are really prepared for any other consequences of Climate Change but I think may be its still work in progress" (Participant 9 Kusile Pretoria 16/8/14)

Broadly speaking, the federation realizes that climate change is part of deep ecological crisis hence it has effects on both workers and the environment. However, the study found out that so far COSATU has been slow in implementing its initiatives on climate change. From the responses, it came out that up to date the initiatives have not gone beyond policy formulation even though there are some initiatives that are happening at federation level. While leaders are claiming that they are doing a lot, the perception of the workers at grassroots level who were interviewed is that there is more talk and little action as most of the workers at grassroots level are yet to see the fruits of the policies and resolutions. Looking at the responses from these workers on the shop-floor level it is evident that the federation still has a long way to go with its responses to green jobs which has direct effects on the workers. One thing which came out is the limited sensitization of the grassroots on the effects of climate change on their day-to-day lives.

5.3.2 COSATU's Education Programs on Climate Change as part of the initiatives

The federation has begun workshops on climate change in which it is conscientizing its educators, organizers, health and safety stewards and policy formulators. So far COSATU has conducted a number of workshops with the educators from affiliates who are expected to come up with climate change education programs in their respective unions. Since each affiliate has different needs and challenges regarding climate change, COSATU urges unions to form their own sector specific policies that will speak to their needs. Even so the federation depends on the

affiliates to use the skills development funds and develop the green economy programs in order to facilitate the transition.

Obviously the transition to the low carbon economy may require some workers to be re-skilled in order to fit into the transition and this is where affiliates are expected to work with the government through SETAs. This will help to match job potential with economic restructuring which are essential in skills development. However, it is imperative to note that the re-skilling proposals which are part of the Just Transition demands are still at infancy stage. For example, an officer at COSATU said:

"You have the affiliates, the SETAs, government and off course the business to develop those training programs. If you say these workers have lost jobs, how do you train them, you also have to now say ok here are institutions which will take those workers who may be displaced because of the change in energy planning and say how do you re-skill them". (Participant 1 COSATU 14/7/14)

However, the issue of re-skilling workers, although advocated by the labour movement within the just transition, has been received with mixed reactions from the government departments. For example, the Department of Energy advocates increase in energy sources that include nuclear and flaking while the Department of Environmental Affairs advocates reduction in emissions and protection of the environment. Government is of the opinion that even within the transition to low carbon economy, all the existing skills will still be needed hence there is no need to re-skill or transfer skills for workers. One government official had this to say:

"Where there is need for semiskilled workers to move, they can be relocated to sectors that require those skills like shale gas. I need to point out that mining and renewable energy are

not the same and it is better to get young graduates into the new technologies than take old people" (Participant 3 D0E Pretoria 2/7/14)

Again the government officer said:

"Different aspects of energy will require different skills. The issue of re-skilling is not an easy thing, who will do it? How long will it take to do it? The new companies in the new technologies are not the same as the existing ones". (Participant 3 DoE Pretoria 2/7/14)

These differing views between labour and government can be the cause for concern where labour expects and advocates re-skilling from government and yet government does not have any such plans. This is where strategic planning with allocated time frames on the transition becomes necessary because it will entail how this will happen. Again the issue of stakeholder engagement is critical to ensure that demands and policies made are based on agreed platform. Where the transition is gradual and the approach is long term and done in phases, there might not be a need for re-skilling or transferring of skills for existing workers as plans can be put in place to train young people to take up the new jobs. The phased approach becomes necessary as the transition is happening where more renewable energy is introduced to meet the increasing demand for energy and the fossil energy is reduced. This approach would help to dispel the fears of job loss for workers in the fossil fuel industries. Even in the event that some workers are affected like it happens with any change, other means of handling change are explored such as making provisions for retirement packages to those affected.

In order to make the knowledge of climate change understood by local people, COSATU's Reference Group has made proposals to translate its climate change policy framework booklet into 11 local languages as part of conscientizing initiative which will be tabled during the next

congress. This is an initiative to teach the basics of climate change to ordinary citizens which is one of the functions of COSATU. Despite South Africa having 93% literacy rate (CIA world Fact-book 2014) and being one of the highest on literacy levels in Africa, the majority of citizens uses one or more of the 11 official languages in their communication and translating the booklet can be a better way of bringing awareness of climate change to the people. However, a NALEDI member expressed that the progress on these initiatives are too slow when he said:

"What we want to do (translate) like am saying is just to get the workers to be re-skilled instead of being retrenched. We re-skill them towards renewable energy jobs and green jobs so that's one of the things that we are doing but like am saying it's all very slow. Right now the focus is just on conscientizing about democratizing climate change. That has been the focus that eeh being able to talk to an ordinary person on the street around climate change in a language that they will understand". (Participant 8 COSATU 1/7/14)

From the findings, it is clear that the federation's responses are still at high level and have not gone down to the ordinary workers and citizens. This confirms the ignorance displayed by some shop stewards during the climate change workshops who are supposedly the leaders of members on the shop floor. There is therefore an urgent need for the federation to do more in ensuring that the issues of climate change which directly link with green jobs become part of discussions within the unions.

5.4. COSATU's engagement with Government on Climate Change issues

COSATU advocates for government economic restructuring that is necessary to meet the job creation potentials in the renewable energy sector. It emphasizes the importance of skills development and formulation of policies that speak to the vision of job creation and supports

social and environmental justice. Hence it sees the issue of green jobs from a class perspective and combines environmental, economic and social perspectives to it. One COSATU Officer said:

> "Because it's possible to have a green job that does not address climate change by the way. And that's why we disagree with the idea of greening the economy. Which means it's a question of class perspective; from our perspective as I said eeh we don't separate issues of environment from economic and political development of a country. (Participant 1 COSATU 14/7/14).

COSATU engages with the Department of Environmental Affairs which formed the National Climate Change Committee, a stakeholder's forum for Climate Change related issues involving labour, business and other government departments. It may become difficult for the two entities namely: government and labour union (COSATU) to meaningfully forge ahead collaboratively on this issue of green economy when they differ sharply on the basic conceptualization. COSATU believes environmental, economic, social and political issues are one and calls for a common strategy or approach in tackling them. But government would like to treat these as separate issues probably in fear of losing popular support and chasing away investors. As a result, it is pursuing neo-liberal economic policies which are characteristic of capitalism. As all capitalists are concerned, their main aim is profit maximization through overproduction and exploitation of the environment.

The federation also engages government during its workshops where government officials are invited to make presentations and also when it has to make any policy submissions. In its engagement with government, COSATU faces a number of challenges as the officer claims:

"The problem with the NCCC is that government normally just comes to report what it has been doing. It doesn't really engage or consult."(Participant1 COSATU 14/7/14).

Labour seems to see government's engagement as not consultative as government only presents its perspectives. Lack of consultation is likely to affect output and quality of policies formulated. It has the possibility of overlooking some important aspects which in the perception of labour would help government in realizing the green economy.

The other challenge is that government programs seem not to be consistent with what COSATU is doing as confirmed by its officer who claimed:

"Government is unaware of what we have been doing on climate change because it doesn't really engage us in these forums effectively. You can't just invite people to a meeting and just say you gonna report your views. You must say what is labour's view on this, what is business' view and from there you have discussions". (Participant1 COSATU 14/7/14)

Again labour claims that the presentations made by the professors from different universities who represent government during the meetings as too technical for their understanding and not conducive for engagements in a social dialogue. He also expressed this concern as follows:

"The last meeting I went to, there was this person (from government) who presented and nobody engaged her because the presentations were all technical. Not even people from business engaged her" (Participant 1COSATU 14/7/14).

Again participant from NALEDI reluctantly said,

"The participation of labour has been quite low. We've just aah just attended the first meeting in May aah and the big problem that we found there is that aah the talk is very I don't

want to say complicated yaah technical that's it. It's very technical so it's been very difficult for labour to engage with what's happening with what government is planning aah and something else which we noticed is that at these meetings it's more of government telling people what they are doing and not finding out what is labour doing and other organisations are doing". (Participant 8 COSATU 1/7/14)

Such an action limits engagement among stakeholders and promotes the common perception that the issue of climate change and transition to a green economy are elitist issues. If government was serious about these issues, the best strategy of ensuring that it speaks at the level of the common man is by simplifying the technical presentations and enhancing engagement of all stakeholders.

The other challenge that labour faces in engaging with government is that government seems to miss-locate the issue of climate change within the broader social economic realm of the society. An officer at COSATU expressed this concern:

"What has happened is that government has sometimes missed to route the issues of climate change within the deeper social economic issues in our society….. and that's how people then can start to understand the effects and actually start to support all that government is trying to implement. ….. and not view policy as a top-down approach or as a preserve or space only for the educated and bureaucratic elites…. When you talk about a democratic state you must democratize your policy making process…. have policy that can allow or be conducive for enhancing engagement (Participant 1 COSATU 14/7/14).

The point being highlighted is that if government had recognized that the issue of climate change is a component of democracy, it would find it necessary to adopt a consultative or participatory

approach in policy formulation and implementation. By so doing, the people would start to understand the effects of climate change and actually start to support all that government is trying to implement. What is currently in place is that government is handling climate change in a top-down approach or as a preserve or space only for the educated and bureaucratic elites. This requires a review of the communication process which entails simplifying the issues to allow enhanced engagement from labour and other stakeholders. This will support the tenets of a democratic state where policy making is democratized and is conducive for enhancing engagement so that common person in society who is poor or marginalized can participate.

However despite the existence of NEDLAC there are still concerns raised by the federation regarding lack of meaningful dialogue among stakeholders on the issues of climate change, the green economy and the Just transition. Besides, no alternatives have been offered to government on how best each stakeholder can support the issues of climate change, green jobs and the Just Transition. The NEDLAC is a social dialogue forum where government and all organized businesses, labour and community groups discuss issues of social and economic concerns to make economic decision making process more inclusive. This is the forum where labour could take advantage of and use it to advance its interests but government creates no opportunity to these groups to air out their views and contribute to the policy as an economist at Wits University observed:

> "NEDLAC comes up with nice progressive policies but if government does not want to implement them it ignores those things". (Participant 7 Wits 18/6/14)

A research officer at COSATU also said:

> "I would say that to a certain extent government has taken labour quite seriously yeah. Particularly when it's in the formal processes like the NEDLAC, they are forced to take the issues raised seriously. (Participant 2 COSATU 14/7/14)

Yet it was interesting to note what one Reference Group member said as follows:

"These should be raised in NEDLAC because NEDLAC is meant to be for labour and business and civil society and government. All four partners are meant to be there. But I am not saying that labour is not engaging at all. What I am saying is that labour does not always engage with government in policy making processes" (Participant 6 Wits 3/7/14).

It seems there are different views from the labour movements on the effectiveness of the NEDLAC as a social dialogues forum. Such forums need to be taken seriously by all stake holders for them to be beneficial to the citizens at large. According to ILO, social dialogue is critical and relevant for advancing solution to build up social cohesion. One measure of the efficiency of social dialogue is the political will and commitment. This calls for all parties to engage and provide the appropriate support to the forum as this will enable better policy formulation. Effective dialogue will enhance sound labour relations in an effort to achieve decent work and social rest.

Obviously, COSATU has slowly started responding to the issues of climate change which affects workers and communities. However, there are still some areas where the federation could use its numerous advantages to advance the issues of climate change and green jobs. As a mass movement, COSATU could effectively run awareness campaigns in the workplaces and the communities. Also they can dedicate time to talk about climate change during their meetings in order to increase the consciousness of the workers and the communities. Another area that the

federation could use is the media which has access to the public where it can put up programs on energy efficiency and to teach the citizens on how to respond to climate change which also affects them. These initiatives can help the federation to take the issues of climate change beyond policy formulation into practice on the shop-floor level and the communities. Climate change and green jobs are issues which affect workers and communities directly just like other bread and butter issues which require the federation to increase its focus on.

5.4.1 Is Labour aligning its environmental responses with Government Policies?

Despite many initiatives on paper both in government and within the federation, it seems that as social partners, the two bodies are not working in unison. The study revealed this when it attempted to find out the responses of labour to see if it is aligning its policies with those of government. When asked whether labour was aware or taking advantage of the government initiatives like the Standard Offer Incentive Scheme, the COSATU Officer said:

"We are not aware of this because government does not engage us, that's the main thing they don't engage us..... if you say am a stakeholder then engage us formally. We're not going to respond to the website" (Participant 1 COSATU 14/7/14).

Again on research activities between labour and government one participant said:

"Unfortunately I rarely see unions busy with climate change policy trying to work closer with government..... They need to stay up to date more on policies. At the moment I find them carrying their own research in a vacuum from what the government research..... Especially on climate change everyone is doing their own. Labour works closer with civil society on these issues but not with government and I don't know why" (Participant 4 Pretoria 2/7/14).

But according to the Green Accord, it stipulates that government and labour must work together to create cooperatives and develop skills for workers. However, it also seems according to the respondents that labour is not part of most crucial climate change committees that government has put in place like the Integrated Energy Planning Committee. The current government energy policy is heavily dependent on coal and only a small component has been allocated to renewable energy. This is where labour needs to engage government more to achieve its plans of ensuring increased energy access to the citizens through expansion of renewable energy.

There are also some areas where labour disagrees with government like the greening of the economy. Labour views this as a result of pressure from large corporations which forces government to overlook economic transformation using radical changes. For example, the reduction of emissions could have been pursued using radical strategies unlike the current 'business as usual'. This is seen from the government's industrial development paradigm which limits it to traditional framework and seeks to attain 'greenwash' capitalism. COSATU is also critical of some of the policies like the NDP which it views as based on a status quo trajectory although it was surprising to note from the Wits University economist who said:

"No no no no labour did not have any input in the NDP. I was there I know.... They (government) met COSATU and said COSATU here is our diagnosis of SA's problem you see..... But as to whether COSATU's input changed anything. I can tell you now labour made some submissions to NPC BUT those submissions they were not even entertained. They were not even a debate, nothing (emphasis) you see" (Participant 7 Wits 18/6/14).

However, a representative of COSATU was assigned to attend meetings on NDP but the issue that became clear during data collection was that labour representatives seldom attended

government's policy-making processes where business is very active although this is a critical component for influencing policy. Labour seems not to take such meetings seriously otherwise it really would have taken the demands of the workers forward and questioned those policies that are not in the best interest of workers. On the other hand, trade unions may not be at fault for not engaging effectively due to constraints like lack of proper communication on the part of government where discussions and presentations are too technical for better understanding. Although some union leaders expressed the 'vested' interests at play that influences the government decisions, it was beyond the scope of this study to find out what these were and who else was involved.

According to the study, there is need for policy coherence within government departments to ensure that each policy compliments the other. At the moment, labour views government as contradicting itself with its own policies when it supports low carbon economy and at the same time increasing nuclear energy and introducing shale gas. Again labour and environmentalists view government programs like REIPPP as a privatised program which is meant to support the private businesses of foreign investors and that the sustainability of the jobs created through the program is questionable. Labour views government's direction on renewable energy as a way to allow space for the private sector to make profits. For example, an officer at Earthlife had this to say:

"On one hand you have the parliament and environmental affairs making climate change policies and on the other hand you have all the other departments pursuing an intensive mineral economy..... All the government departments are geared to pursue the development agenda right. Aaam the agenda is we are going to explore coal so now every single department has to

line up to this call but at the same time the Department of Environmental Affairs is saying something different' (Participant 4 Earthlife 30/7/14)

Another one at Greenpeace said:

"You can't have an energy policy that says we gonna build coal power stations and then we have a water policy that says we need to preserve water because you already have two conflicting pieces of policies" (Participant 5 Greenpeace 10/6/14).

This was also confirmed during the presidential address to parliament on climate change and governments energy programs in which the government reaffirmed its plans to increase fossil energy capacity. In response to this COSATU issued a statement to criticize the president's speech which it felt was contradictory to the commitment to reduce carbon emissions.

Again it is acknowledged that the private sector is essential to provide competition and efficiency, and that it has enough resources to enable the implementation of the renewable energy technology at a cheaper cost. However, increasing renewable energy allocation could help to include more local participation and ownership and this makes complete privatisation of the sector as not being a viable option in achieving social justice.

5.5. Social Alliances with the environmentalists on Climate Change

COSATU claims to be working with progressive environmentalists who have a trade union background and civil societies to advance environmental issues. These environmentalists like WWF, Greenpeace, Earthlife and 1million climate change jobs campaign are part of the COSATU's Reference Group for climate change. This is where labour benefits from research information provided by the group members even though they have not started doing any projects together. It is a well-known fact that climate change issues are new to labour hence the

formation of alliances with professionals that could help the federation to learn and understand the technical aspects of climate change from those who have the experience. Currently, COSATU is planning to hold a climate change conference prior to the 2015 congress.

Recently SATAWU, NUM and NUMSA have done some work on climate change but most of the affiliates on whom the federation relies in effecting its policies have not done much. Currently the WWF is working with SATAWU on the public transport project. Despite this, some local shop steward councils also discuss issues of climate change even though there has not been any intensive program in place. It is through the 1 million jobs campaign that the affiliate is able to work with the communities on climate change issues. This research focuses on NUMSA's SORE initiatives undertaken on green jobs. However, both SATAWU and NUM seem 'minimalist' on their approach to environmental issues despite the fact that they are sectors within the mineral energy complex unlike NUMSA that shows signs of 'transformative' approach to the issues (Cock 2012). For example, both websites for SATAWU and NUM do not show anything about environmental issues which shows that it is still not a priority like any other traditional trade union bread and butter issues.

The Federation sees the relationship with the environmentalists as active and not adversarial in which debates allow productive engagement and there has been no instance where parties have taken different positions on climate issues. Even so environmentalists view the engagement with labour as an important step in tackling the issues of climate change although the relationship is new and still at the level of understanding each party's basic concerns. They view labour's access to the workers as the best platform to effect change and make a difference at all levels through conducting awareness campaigns on environmental issues and energy efficiency. This was also echoed by one participant, a member of the academia from Wits University who said:

"Because unions are the most organized force in society, they can contest …. they are their vanguard if I can use the term. They are the vanguard of the class contest of growth whether it's redistributive or not right? (Participant 7 Wits 18/6/14).

As the most organized force in society, unions are supposed to be the vanguard for the workers in the class contest. Environmentalists view labour as having an advantage to demand government to implement renewable energy local production and advocate the development of an embryonic social ownership. The economist at Wits emotionally said:

"But the unions are key to contest at any level actually eem the movement from renewable to social political, because communities are weak without unions! (raising voice). They can march and say we want RE but the capitalist system will continue the way it operates because that march is not disturbing production. It's when the people who are at the level of production begin to contest, you know, that transition takes place yaah? So unions and in fact if I had my way COSATU should be engaged in the battle against private capitalist ownership of crucial sectors on many fronts you know" (Participant 7 Wits 18/6/14).

However, there are challenges facing the alliance between the labour movement and environmentalists whereby some issues advanced by environmentalists are seen by labour as job threatening. Environmentalists views labour as not 'walking the talk' to make a difference on climate change issues and at certain times environmentalists think that labour does not take the issues of climate change as important to their movement even though they acknowledge it. This is seen by the amount of time it takes for labour to take a position like on Flaking, an issue perceived as important to environmentalists but sensitive to labour.

The misconception is minor for it shows that basically the two are on the same plane the only difference being the level of emphasis. Labour deals with so many issues that deal with the welfare of workers and climate change is just a component while the environmentalists have devoted all their energy and resources on protecting the environment. That is why environmentalists sometimes radicalize environmental protection with no regard for job creation and security.

5.6. Political, financial and social constraints that the trade unions face in implementing the green jobs strategies

The study looked at possible areas in which the labour movement may find challenging as it strives to implement the green jobs strategies. These areas are political, economic, and social constraints. Of these three, political and economic challenges were found to be the main areas where unions are facing more challenges. The study categorized political challenges into 4 areas: interaction with policy making processes, internal politics, influence of the social alliance on decision making processes and conflicts between affiliates. Economically, the study looked at possible challenges that may hinder implementation of green jobs and if there were any social constraints faced by the union when interacting with the society. Finally it also looked at how the unions plan to respond to these challenges.

5.6.1. Constraints faced during policy making processes

South Africa has a social dialogue forum in which organized workers, communities and business leaders meet with government to discuss socio-political issues which is called the NEDLAC. Apart from this, there are also other forums like consultative workshops where government is required to discuss and engage all stakeholders before and during decision making. However, the majority of the participants expressed concern over the interaction process with policymakers

during consultation meetings as well as workshops. The labour's view is that during these processes government was more of telling than consultative as it only makes presentations of what it has done without soliciting the views of other stakeholders. Again in some instances the study found that government tends to ignore the decisions made at NEDLAC.

From the findings, labour seems struggling to find space to participate fully in government policy making processes. This shows that the communication strategies are not right in as far as government dealing with stakeholders is concerned. From the respondents, it is clear that the communication mechanism in place currently does not make the meetings conducive to social dialogue. However, when government, the academic professional at Wits University and the environmentalists were asked on the participation of labour in the policy making processes this is what they said:

> "Labour is always invited to workshops but none of them attends. They complain about government's lack of consultation yet invitations are sent publicly. We specifically invite trade unions and local government/civil society as targeted stakeholders but they choose not to attend" (Participant 3 DoE 2/7/14).

Another one said:

> "Unfortunately, unions have a lot of power, they could do more but unfortunately I rarely see unions busy with climate change policy trying to work closer with government. They don't attend government processes. Now they are trying to attend more but they don't attend. They need to stay up to date more on policies. At the moment, I find them carrying their own research in a vacuum from what the government research is doing and labour should be informing these two research processes. Especially on climate change, everyone is doing their own things.

Labour works closer to civil society on these issues but not with government and I don't know why" (Participant 4 Earthlife 30/7/14)

The government through the Department of Energy formed the National Climate Change Committee in which it engages the stakeholders on the issues of climate change. However, it is in these meetings that trade unions find challenges to respond to and at times attend the meetings as one COSATU officer observed:

"So we have a problem with the way this NCCC things are run eeh and also the other problems that we have is that the presentations are too technical eeh many professors who come to present there from different universities and you see that's not conducive for social dialogue..... The last meeting I went to, there was this person who presented and nobody engaged her because the presentations were all technical" (Participant 1 COSATU 14/7/14).

Another participant at NALEDI also lamented as follows:

"The biggest problem that we found there is that aah the talk is very I don't want to say complicated yaah technical that's it. It's very technical so it's been very difficult for labour to engage with what's happening with what government is planning aah and something else which we noticed is that at these meetings it's more of government telling people what it is doing and not finding out what labour is doing and other organisations are doing" (Participant 8 COSATU 1/7/14).

Such misunderstandings are to the detriment of progress on issues that affect workers and citizens in general. Where government presents issues in a manner that does not allow for understanding and engagement, the outcomes of such meetings may become ineffective. And

because labour views this as consultation in 'bad faith' there are high possibilities for the union to shun or give excuses for not attending such meetings.

5.6.2 Constraints to do with Job Growth and Renewable Energy Projects

Labour acknowledges that there are tensions that exist between job growth and renewable energy processes that cannot be ignored. These tensions can exist among affiliates because those unions from the non-renewable sector fear that the introduction of renewable energy will threaten the job security of their members. Hence the labour movement advocates for a Just transition to ensure that the negative impacts of the change are managed so that those affected with the shift can be assisted accordingly. One area which the Green Accord supports is the creation of cooperatives for such workers which it advocates government and labour to work together in forming them. However, research done by some scholars and environmentalists show that the introduction of renewable energy will create more jobs than it will lose. But the only challenge may be that the jobs created may not be for those who lose their jobs as the new technology may require new skills which these people may not possess.

It is for these reasons that the union would like to see government formulating programs and policies that support local technological advancement which will support the expansion of the renewable energy projects. This is because the importation of technology which is mostly very expensive may have financial impact as well as affect the balance of trade payments for the country as imports exceed exports. Labour argues that the development of the renewable energy sector must also be linked to the attempt to industrialise South Africa whereby the manufacturing sector is revitalised to become a source for job creation. The other challenge is the importation of skills for the renewable energy sector as the country does not yet have adequate skills. This can hinder expansion of employment and contribute to skills deficiency in the country.

This can be overcome by transforming the current education curriculum to cater for green economy courses. The ILO (2010) report on skills for green jobs in South Africa shows that in terms of legislation, the country lacks support for the skills development for the green jobs. Despite not having pressure of green economy at the moment, it is essential that the country embarks on global integration processes that will allow learning from world trends on green economies.

There are also tensions regarding the green jobs issues between those in energy intensive sectors and those that are not as a shift towards low carbon economy may entail restructuring of the economy which may require skills transfer or relocation. Inevitably some workers might be displaced in the process and this calls for plans to ensure that such a transition becomes smooth. Again there are still debates within the labour movements both locally and internationally on how to make the green jobs to become both sustainable and provide decent employment which requires a policy discourse. The Green Accord talks about the need for government to work with labour in creating cooperatives for the displaced workers but these are still at proposal stage so far.

The other challenge which labour faces is during its interaction with environmentalists. Labour views the issue of green jobs as a sensitive debate because of the dominance of the mining sector in the country's economy. This is so because the number of jobs that are created in the mining sector is huge and therefore the debates around green jobs need to take into consideration the job implications in this sector.

5.6.3 Constraints concerning Trade Union's Political Alliances

The political and social alliance in which COSATU, ANC and SACP are involved in is another aspect which the study looked at as it is a crucial element in determining the unions' ability to

advance workers interests. COSATU's support for the alliance is in the hope that government would prioritise working class issues on its agenda. Pillay (2008) asserts that whilst ANC is still keen to use workers to consolidate its power, it is also pursuing Neo-liberal policies with different actors who articulate redistributive development discourse.

This study found out that the academics, environmentalists and workers are of the view that the labour movement (COSATU) is constrained within the alliance which makes it difficult for it to advance the issues of the working class during engagement with government. The participants called for the labour movement to assert its independence in order to deal with workers' issues properly. For example, an economist at Wits University said:

"My view is that COSATU is so constrained in the alliance that if it were to move independently and implement something... it's quickly seen as opposition you know….. Hey! Let me put it like this. I think COSATU must assert its independence". (Participant 7 Wits 18/6/14)

An officer at NALEDI also said the following:

"You know not just on climate change issues, on many issues. I think (hesitantly) COSATU get compromised, COSATUs position gets compromised for the sake of the alliance….. So for me personally I would (hesitantly) love to see COSATU break away from that alliance so that its able to take the fight to the government……. the boardrooms maybe that's where some of the compromises are made. We are not a party to what happens. I always wonder how eeh the influence that COSATU has on some of the decisions that government takes. How strong is that influence you know….. I can't really say how". (Participant 8 COSATU 1/7/14)

Still another participant from COSATU Reference Group explained thus:

"I think at the moment there is a sense in which the alliance sort of smothers criticism of government……. But the problem is, and am not even talking about criticism here am talking about participation" (Participant 6 Wits University 3/7/14).

This confirms (Pillay 2014) assertions that with the alliance, COSATU is constrained since it becomes absorbed and fails to push for labour issues. This is despite the claimed benefits that COSATU gains from the alliance as it turns the federation's attention from pursuing the union's agenda. Yet within labour there are other views that the movement is not constrained within the alliance as it is able to question most of the government policies through its resolutions and statements. The argument presented is that COSATU is in alliance with ANC and not with government and also that asserting independence may not bring solutions to climate change issues. This is what the officer at COSATU said:

> "The only thing there is a perception that because we are in the alliance it means we are in agreement no and by the way we are not even in the alliance with government we are in alliance with the ANC…… noo its not because of the alliance that we are constrained" (Participant 1 COSATU 14/7/14).

The question remains as to whether the labour movement is holding government accountable or the movement which has a better platform with its ability to mobilize masses is not creating enough noise to influence change. Still the labour movement claims that the issue of climate change should be seen from a class struggle perspective as capitalism is at the root of ecological and environmental damage. It views the struggle for environmental justice as one that requires dismantling of class structures. He also said:

"It's a question of class perspective…. eeh we don't separate issues of environment from economic and political development of a country……. so the fundamental cause of climate change is capitalist accumulation right? Because capitalism as an economic system always sticks to extract resources and labour at a cheapest possible cost…. those productions in capitalist accumulation destroy the environment…….. Capitalism is always characterized by the crisis of overproduction" (Participant 1 COSATU 14/7.14)

Another participant from COSATU Research Department said:

"You know if you look at the policy document you will see that the analysis is that the environmental crisis is rooted in capitalism. And therefore our struggle for environmental justice is one that argues that we have got to dismantle the class structure (Participant 2 COSATU 14/7/14).

Both environmentalists and academics have the view that labour does not take the issues of green jobs seriously as seen by its lack of taking positions on critical issues like flaking. However, during the study, it became clear that the issue of climate change is still a new subject and yet to be prioritized. Another issue is that trade unions have their own processes of making decisions that need the understanding of the other stakeholders. There are also certain issues which environmentalists and academics advocate which are detrimental to union members hence require proper consultations which involve social considerations before decisions are made. For example, environmentalists may be interested in what compromises jobs like the case of coal which is a dirty energy but a huge source of employment to most semi-skilled workers.

Again environmentalists do not see any constraints that labour may face in implementation of green jobs apart from lack of political will from government and the 'vested interests' from some

politicians. This is seen through the reduction in the allocation of renewable energy as compared to other energy technologies by government which is mostly not in the best interest of ordinary citizens. 'Vested interests' of some politicians and business people who own the fossil fuel mines are also contributing to the slow migration towards low carbon economy. One officer at Greenpeace said:

"I Think the biggest constraint that we have and the only rather constraint that we have is that of lack of political will and there we have as somebody pointed out I think we can rightly include vested interests……. instead of saying let's build RE we say no no here is a little bit….. the entire industry gets much much less …... Certainly the questions remains then why are they making choices that are not in the best interest of the people in this country and that is why we start to question whether there may be vested interests" (Participant 5 Greenpeace 10/6/14).

Again another informant from Earthlife said:

"Yeah government is totally disintegrated. On one hand you have the parliament and environmental affairs making climate change policies and on the other hand you have all the other departments pursuing an intensive mineral economy and when SA goes to international meetings they say totally different things than what is done at home" (Participant 4 Earthlife 30/7/14).

5.6.4 COSATU's financial challenges that impact the implementation of the green jobs initiative

South Africa is a mineral-energy complex country with different elements of energy sources which include renewable energy such as solar, hydro power and non-renewable energy sources like coal and nuclear. However, the South African government supports initiatives that will enable the shift towards a low carbon economy through its policies like NDP and IEP. The view

of the labour movement is that energy planning should expand on the renewable energy to fit well into the low carbon economy. However, the academics see the power of capitalists to be a hindrance to the implementation of government's low carbon initiatives. Another problem is that the South African government is pursuing neo-liberal policies that believe in the market solution.

This was recently evident by President Jacob Zuma's parliamentary speech on climate change when he mentioned about the government's plans to increase coal and nuclear power stations. This move by government will require more importation of skills and can be environmentally hazardous. Besides, it relies on importation of expensive technologies and does not address energy access challenges of the poor masses for it largely targets the corporate or industrial world. This is so because nuclear energy sources require transmission lines like ESKOM energy which could exclude the majority of rural areas where there are no such lines.

These statements have also been seen by environmentalists as government 'going against its own policies' which supports low carbon economy. An officer at Greenpeace said:

"So you can't have an energy policy that says we gonna build coal power stations and then we have a water policy that says we need to preserve water because you already have two conflicting pieces of policies" (participant 5 10/6/14 Greenpeace).

Again the economist concurred:

"In the state of the nation's speech, President Jacob Zuma has said the opposite. He said we are going to develop nuclear energy and we are planning to build 4 big coal fired power stations…….. We are going to open more new coal mines and all this is much too expensive and dangerous" (Participant 7 Wits University 18/6/14).

Yet the officer at COSATU had this to say:

"So to talk about expansion of coal fired stations for government itself is conflicting. I mean it's in contradiction to the policies that they themselves have adopted and that is we should be growing increasingly towards the low carbon economy" (Participant 2 COSATU 14/7/14).

In a situation where government policies and plans conflict each other there may be serious obstacles to the successful implementation of the plans on the ground. Choices have to be made between objectives and take advantage of the existing trade-offs between them. External potential impacts on certain government decisions like neoliberal policies cannot be undermined which force government's conventional interventions to become counter-productive. Often decisions on policies are made in full view of the potential conflicts but consultations are seldom in attempting to improve the implementation of such conflicting policies. However, the state is a crucial stakeholder because of its statutory responsibility of formulating policies which are essential to the successful implementation of the policies.

One area that helps to make informed decisions is the area of research as empirical evidence is critical for strategic decision-making. However, regarding green jobs, the labour movements worldwide have made little progress in providing research-backed arguments in this area and COSATU has not been spared on this. A member of NALEDI said,

"Unfortunately at the present moment, labour has not yet done any research looking at the green jobs. We rely upon quite a lot of other researches that have been done……. that have highlighted the potential for green jobs ….. in fact that's one of the criticisms that we have had of ourselves that when it comes to the issues of jobs then the figures we have largely relied on what's already been done by other institutions" (Participant 8 COSATU 1/7/14).

The Labour movement and the academia also acknowledged lack of capacity to handle the issues of green jobs. The officer at NALEDI also said:

"I think one of the problems aam that we have is that we lack the capacity. Capacity is a big problem at labour as a whole because we don't have climate change eeh eeh people working specifically just on climate change" (Participant 8 COSATU 1/7/14).

Currently South Africa has both scarce skills and technologies for implementing green jobs locally which requires importation. In implementing green jobs labour views, the issue of importation of technology would become an expensive venture for the country as this may have balance of payment constraints on the government. This is another area that both government and stakeholders need to work together to ensure that the technologies being imported are of good quality thereby avoiding making South Africa a dumping ground for obsolete technologies.

Financially labour acknowledged that it has challenges in providing funding for conferences on climate change or in hiring climate experts to assist them. It is also lack of finances that is hindering the federation from monitoring climate change implementation progress within affiliates and also faces financial hurdles in translating and publishing its climate change policy framework into local languages. Labour claims that most of the donors have pulled out because they see South Africa as a financially independent country as mentioned by a member of NALEDI who said,

"But funding has been eeh its still quite a challenge because these conferences are quite expensive to run……We need to have budgets to have more copies to be able to distribute" (Participant 8 COSATU 1/7/14).

However, the study also found out that labour is capable of funding its own projects as it owns the pension funds and many investments. Labour can use part of these funds to finance the climate change projects that will resonate within the implementation of green jobs. This is what the officer at Earthlife said:

"Really? I think……. (laughing) yeah then everybody is broke. The unions own the pension funds right? So they can use the pension funds to make the investment….. Unions can invest in green jobs, they can support green jobs, they can show support that no more dirty energy investments be made and more renewable energy developments be initiated and put their strength behind cleaner development. They can make green jobs a reality" (Participant 4 Earthlife 30/7/14).

As a movement, labour claims to face financial challenges which hinder the implementation of its plans like conducting research and campaigns on green jobs. It calls for support from donors and government to enable it to implement its initiatives and projects. However, the unions have several investments from which they can channel some of the funds to finance renewable energy projects which will promote green jobs. Failure to do so is a sign that labour is 'sitting over the fence' on a very important thing on which it should have taken action.

5.6.5 COSATU's social constraints in implementing green jobs initiatives

Labour is of the view that the issues of green jobs, although it affects workers, the way government approaches it suggests that it is a preserve for the educated and bureaucratic elites. This approach misses the location of climate change within the deeper social economic issues that common citizens are faced with. Labour thinks that both government and environmentalists do not align the issues of climate change with social challenges yet there are intersectional relationships between politics, social issues and economics.

However environmentalists do not envisage social constraints in responding to green jobs issues as they view workers being supportive of working in safer environments than the health hazard areas. Job sustainability of the fossil fuel industry is another aspect that environmentalists question as evidenced by continuous strikes in the sector. One Greenpeace officer had this to say:

"I will find it hard to believe that the people would say no to Renewable Energy and demand to continue living in coal infected areas. It's possible they could but I certainly doubt they would ….. the strikes in the mining sector should tell people that that industry is not sustainable. Obviously people are not happy about the kinds of jobs and the pay which those jobs involve" (Participant 5 Greenpeace 10/6/14).

According to literature reviewed, there is need to advocate for social reforms beyond strengthening institutions and commodification of resources and focus on local communities' control of social and environmental relations within small scale economies. Community autonomy requires empowering those who have been marginalized by globalisation and also the inclusion of women, local communities and the poor into environmental and social justice discussions.

5.7. How is COSATU responding to these constraints?

The study wanted to know how the labour movement is responding to the political, social and economic constraints that it faces in its quest to respond to the issues of green jobs. On the challenges that the union faces during its interaction with government in the policy making process, COSATU indicated that it has written a letter outlining its concerns. However government is yet to address them but has promised to look at them and give feedback. The challenge the study found with this kind of response is that labour has not given the state a timeline in which it expects the response and any consequences that may arise should it fail to do

so. This can end up with labour getting no response as the concerns are open ended. There is need for finding better ways of expressing the concerns and a plan for following up responses from government. The solution for labour is to demand accountability and increase advocacy and training of its membership on climate change.

Labour has also suggested the need to put in place economic and industrial policy measures that will meet the demands in the renewable energy sector. COSATU and other social partners are involved in a campaign to create 1 million jobs in the renewable energy sector. This may require the restructuring of the economic sector as it views the renewable energy sector as capable of meeting the demands for re-industrialisation, employment, energy as well as the reduction of carbon emissions. In COSATU's congress resolutions, the union has made clear the importance of nationalising the key industrial sector of the economy in order for the country to drive industrial development and promote localisation. For the labour movement, nationalisation is necessary to meet the socio-economic challenges because it changes the patterns of economic ownership. This is a good move by the union although it is still not clear how it plans to ensure that this ambition becomes a reality.

On the issue of asserting its independence from the alliance with government in order to be able to advance workers interest, the union argues that its various counters to government policies through congress resolutions and statements are an indication of the union's independence. However, the majority of the respondents indicated that for the trade union to be an independent workers movement, it needs to break away from the alliance. Members see that the federation gets caught up in the alliance and tends to compromise its position. This supports what Pillay (2008) referred to COSATU's position in the alliance as a 'Junior Partner.' Workers call upon

the federation to take the demands to the government even though there are some areas where it needs the alliance. For example an economist at Wits University said:

"It's a junior partner. Yeah that's where I think some of the problems are but I understand yes we do need to work with government but sometimes you can compromise. You get compromised, caught up yeah" (Participant 7 Wits 18/6/14).

According to the study conducted, it became apparent that the federation acknowledges the impact that the internal politics play on its ability to respond to workers issues. Although it was beyond the scope of this study to find out more about the internal conflicts, it was imperative to highlight the issue as it is critical for the advancement of the trade union as one participant said:

"Only over the past years has internal politics constrained our moving forward" (participant 1).

Socially, COSATU realises that the country is one of the unequal societies in the world hence it wants to take the issue of climate change to the public policy discourse. The union plans to get the communities' buy in through popularising the climate change issues through campaigns that promote institutional and personal change of lifestyle. As one way to promote the local understanding of the climate change issue, the union plans to translate its policy framework booklet into 11 official languages. This is also seen as a way for the labour movement to build linkages with the community and be able to show how they can benefit from the renewable energy. For example, the Reference Group member who is also a Professor at Wits University said the following:

"They have to educate the civil society about how renewable energy is cheaper because everyone is worried. All working people are worried about the cost of electricity and RE could be much cheaper, safer and affordable" (Participant 6 Ref group member 3/7/14).

It is clear that COSATU as a federation needs to consider working with the communities to strengthen its perspectives. Taking the community and workers' demands together will enhance the power of labour to achieve gains for its members.

COSATU advocates for the public ownership of the renewable energy sector and not just for security of supply to ensure that ordinary citizens have access to energy. Labour views security of supply as benefiting industries only and argues that these are market driven interventions mainly for profit seeking. However, the emphasis should be made that for the renewable energy to benefit the local communities, it must be socially owned and democratically controlled. This is so because democracy is meant to strengthen and benefit the common citizens and not just benefit a few individuals. Obviously, the renewable energy sector has low financial barriers to entry than the fossil energy and is easy for the local communities to setup cooperatives which can run these projects.

There are also plans to enhance capacity building of the union membership on the issues of climate change as these have direct implications on the implementation of green jobs. This will be done through conducting trainings and workshop programs on climate change which will turns these into training programs for their members.

5.8. How is COSATU leadership supporting the green jobs initiatives

In 2011, COSATU congress adopted a resolution on climate change and made a commitment to support initiatives in this regard. It also 'excitedly' signed the Green Accord which is a

commitment by all social partners to protect the environment and a basis for equal redistribution of resources. Further to this the Central Executive Committee which is the highest decision-making body in the federation approved the climate change policy framework which was a masterpiece where affiliates would draw their sector-specific policies from. However, the study conducted revealed that despite all these, the union leadership still view climate change as a side issue and not a priority from the core labour business of bread and butter demands. This weakens the buy in of the subject and impacts on the willingness to tackle the issue from a class perspective. There is need to engage the union leadership to take the issues of climate change seriously as it has a direct impact on the implementation of green jobs.

Union leadership is viewed by both academics and environmentalists as taking too long to make important positions on issues of climate change like flaking. Also there has been no progress made in advancing the 2011 congress resolution on the nationalisation of crucial sectors of the economy. One participant from NALEDI lamented on the CEC's non-approval of the renewable energy research projects which were done some time back. For example, this is what the participants said:

"I mean that is the thing, decisions come from the central executive committee.... it takes long to get decisions to be agreed upon..... we need to try and attract more senior approval"

Again

"Attracting senior officials within the unions to change their priorities I mean one of the big problems our Reference Group has had is that we don't have bureaucratic officials. It's difficult to make decisions. We may have the best proposals in the world but it's difficult to make that decision, we can't implement that decision or programme because it's got to have the

approval of the senior leadership. So that's been one of the biggest challenges to conscientize the senior officials around climate change. Getting them to make a priority of these things" (Participant 8 COSATU 1/7/14).

Internal politics within the movement is also affecting the progress on advancing and supporting green jobs as respondents felt that leaders are putting much effort on politics than on issues that directly affect workers like climate change. Fragmentation within labour on whether it should maintain its alliance with the ANC is also another reason why the union does not advance the issues of green jobs. Some members feel that it is difficult for the union to raise issues against neoliberal policies advanced by government which perpetuates climate change and the 'green capitalism' whilst it is still within the alliance.

If members don't see their leaders supporting green jobs initiatives it will not be easy for them to fully regard and support it. Where union leaders have limited capability to engage with complex policy issues, there is need to engage professionals and experience partners like the academia and environmentalists who can assist the leaders in understanding the issues. One participant indicated that union leaders seems to know and understand the issues around climate change but do not want to take action on it. This is where the questions of politics come into play as non-commitment is seen as fear of being seen as mounting opposition to government. However, if union leaders are able to put their weight against dirty energy and demand that government should make clean investments, this can be a way to emancipate more green jobs for the members. Leaders need to demonstrate the calculated risk-taking behaviours and become role models which will inspire members to support the initiatives. But as an economist at Wits University lamented,

"Any leader of a trade union would want to know each and every step of the way. How is the national plan going? It's about the nation here and we are the largest federation. We need reportS on a consistent basis you know but that thing never happens. So the dereliction of duty, that's my opinion. You know when you are given a task and you don't do it (Participant 7 Wits 18/6/14).

Leadership is a very crucial element in advancing the issues of green jobs because of its strategic responsibility of making decisions for the federation and ensuring the progress on initiatives. However, research efforts to get the reaction of the trade union leaders on why they lack commitment to the issues proved futile as they seemed preoccupied with other issues and not able to allocate time for interviews.

Workers claim not to understand the issues around climate change as they see them as technical issues and not in their best interest. This is so because they fail to link climate change issues to their social and economic life like the rising cost of food and energy as being caused by climate change. This calls for the need to simplify the issues of climate change when presenting it to the workers and also show the benefits that accrue to them in order to get their support. It is imperative also for the union to make more information on climate change available to the workers like the proposed translation of the climate change booklet which will enable easy understanding and support of the issues.

However it is imperative for labour to use climate change as a class issue and make it a platform for advancing its class struggle. This can be done through strengthening internal capabilities of both workers and leaders to better understand and articulate the issues. Where they understand the issues then they can embrace and support energy efficiency and the just transition initiatives.

There is also need to use comprehensive empirical argument when presenting issues of climate change to workers and leaders. This may increase leadership buy in as they will be able to see how climate change issues are part of the social economic struggles that they are fighting for.

Economists within the labour movement also view the climate change issue as an elite advocacy meant to slow down the development of the new developing countries. They see that the developed world has hegemony over the technology and the manufacturing of the components of different renewable energy equipment so therefore they want to push this. This shows that despite efforts by some within the unions to support the issues of green jobs and climate change, there are others who are against these efforts as they do not view it from a class perspective. Conflicting understanding of the same issue obviously will affect the effective support and implementation of green jobs initiatives.

5.9. Responses of the Affiliate to green jobs - National Union of Metal Workers in South Africa (NUMSA)

5.9.1. Understanding of the Green Jobs Concept

According to ILO/UNEP et al (2008), green jobs are decent jobs created with the aim of preserving the environment in all sectors including industry, agriculture and administration. These are jobs that lead to environmentally, socially and economically sustainable economies through reducing usage of energy and raw materials, limiting the carbon emissions whilst protecting and restoring the eco-system. The concept of green jobs can include restructuring the organisation and production processes using technologies that lessen the negative impact on the environment. In implementing green jobs, the economic activities should include those that promote the prevention of environmental degradation and preservation of natural resources from depletion. Cock (2011) has defined green jobs as jobs that "protect the ecosystem, biodiversity,

reduce energy material and water consumption with effective strategies and de-carbonize the economy whilst minimizing or avoiding production of waste and pollution".

5.9.2 NUMSA's Socially Owned Renewable Energy Initiatives

During the 9th national congress in 2012; drawing from the COSATU's policy framework on climate change and its ideologies of social movement unionism, NUMSA made 15 point resolutions on climate change and also a need to form a socially renewable energy sector within the union that would ensure security of supply and equality of access. It will also provide the basis of energy sovereignty in confronting and overcoming inequality. Furthermore, it acknowledges that a social and ecological transition into a dominant renewable energy is not possible within the capitalist constraints.

The aim of introducing the Socially Owned Renewable Energy Project is to ensure that community cooperatives and municipalities have a stake in the energy and do away with the corporatization of energy. NUMSA through the community meetings conscientize people on energy alternatives and the union is also involved in helping communities to form cooperatives that would run the renewable energy initiatives. These cooperatives would help to provide jobs for the retrenched workers and the youth hence contribute to reducing the unemployment rate in the country. NUMSA also advocates government support in the running of these cooperatives and allocates those projects such as dump site methane extraction that require less capital to be run by these cooperatives.

In promoting green jobs, NUMSA ensures that its members have job security and therefore uses its own funds to invest in renewable energy projects and also helps run most companies that are liquidating. One such project is in Port Elizabeth where the union made an investment to protect the jobs of its members.

5.9.3 NUMSA'S Response to green jobs

The National Union of Metalworkers in South Africa (NUMSA), one of the biggest affiliates of COSATU started programs of education and action towards what is called 'Socially Owned Renewable Energy' projects in 2012. These initiatives are based on ecological Marxist perspectives and emphasize that capitalism is the root cause of climate change hence needs to be viewed within a class struggle perspective. NUMSA's former president made it clear that it was capitalism which caused the crisis of climate change and that there was need to tackle the issue of climate change with a class struggle perception (Gina, 2011). The union has recently embarked on a "build a Socially Owned Renewable Energy sector" whose agenda is to stop another capitalist grab" according to their February 2011 International Conference document. This report endeavours to determine the union's strategies on paradigm shift towards green jobs. It also determines whether NUMSA is using a minimalist approach which emphasizes on shallow green jobs and social protection with the aim of retaining the jobs of vulnerable workers or a transformative approach involving new ways of production and consumption to achieve both decent and green jobs.

The study wanted to know more about the initiatives that NUMSA is currently pursuing regarding green jobs in its pursuit of the 'Socially Owned Renewable Energy' Project. According to the academic professionals that were interviewed, it seems that NUMSA is one of the few unions that have so far responded to the issues of green jobs. A Professor at Wits University confirmed this when he made the following observations:

> "And NUMSA is the only union that is serious. You know I don't know but I think it's because NUMSA is the industrial proletariat you see and the culture of NUMSA….. They are passionate about education not just political ideological education but just

technical education. What is climate change we see so that workers can understand what climate change is. So NUMSA is different yaah" (Participant 7Wits 18/6/14)

Although still in infancy stage, NUMSA is currently making some initiatives on renewable energy which is a core aspect of green jobs. It is involved in policy advocacy with government to ensure that renewable energy policies and programs should include ordinary citizens. NUMSA also involves government and other stakeholders in these initiatives and puts emphasis on the need for community cooperative to have a stake in the energy sector. Another area NUMSA is advocating is that government should set up renewable energy parastatals which can be run by municipalities and not outsourced. Currently NUMSA is interacting with the Department of Energy to increase localization of renewable energy. The union also advocates the reduction in reliance on importation of renewable energy technologies and that government should rather help the local manufacturers to produce the components locally. In one of the union's research project, it was disclosed that out of the one million solar geysers projected only 350,000 were installed of which only 10% was locally manufactured.

On policy advocacy, the union lobbies with government to support programs that will include ordinary citizens like forming cooperatives and helping local manufacturers of renewable energy components financially to avoid closure that would lead to loss of employment. Such government support can help to create green jobs and deal with the issues around climate change. Where government supports local manufacturers through procuring the components locally instead of importing them, it will help to expand the local market. The union also lobbies for the Department of Energy to increase localisation of renewable energy from 30% and include local manufacturing in the localisation. NUMSA also advocates for the government to set up a renewable energy parastatal which can be run by municipalities and not foreign investors. In

addition, NUMSA is also urging Government to support projects like dump site gas extraction which can be run by communities as it requires less capital.

So far, NUMSA has conducted a number of workshops in advancing its SORE initiatives. These include workshops on electricity pricing, solar water heater implementation and it hosted an international conference on energy. The SORE initiative aims at shifting away from corporatized energy towards a system of cooperative control through constituency based governing councils in which the communities and municipalities can have an input on energy resources. Decentralising energy can be a way to ensure the energy is made accessible to the majority poor citizens as they are able to decide on energy alternatives. This was confirmed by an economist who said,

"The only way you can create decent work in this renewable industry is if unions push for socially owned and controlled production of infrastructure…… even if its state owned….. Communities at the local level must share….. Secondly, we need to de-commercialize the development of the technology. Because if people are serious in that renewable energy is going to save the world because coal based energy is going to create global warming all of us, capitalists or working class will suffer. Then de-commercialize….. make it social……. That's the only way to create decent green jobs otherwise you are going to create a capitalist, a green capitalist (laughing) and they are not going to create jobs they are going to behave the same way as coal based or fossil based capitalists yaah" (Participant 7 Wits 18/6/14).

The culture of social movement unionism which believes in worker control and shop-floor democracy is seen in NUMSA in that the union involves the participation of workers and communities in its projects. The unions has made initiatives to train its members on research

about energy and some shop stewards have been involved in study tours to Bolivia, Mexico and Cuba. It is from this group of shop stewards that NUMSA formed a Research and Development Group within its Research Department which started in 2011 after the COP17. The union is also involved in training its shop stewards beyond political education at universities where they are exposed to technical education like research. The purpose of this group is to organise the renewable energy sector, conduct research on renewable energy projects, work with the communities in forming cooperatives and conduct awareness campaign on energy efficiency in communities. This will help workers and communities to change the way they use energy and also reform their consumption lifestyle. One of the research projects that the group has done is to look at the influx of solar system materials in the country based on the one million solar geyser project by government. It also interacts with academic, environmental and government officers through workshops and meetings on climate change.

NUMSA has invested a large sum of its finances from its several investments to ensure that the renewable energy projects become successful. These funds have also been used to acquire factory plants that were on the verge of closing in order for the union members to sustain their jobs and one such plant is in Port Elizabeth which is now picking up. NUMSA has made investments in the procuring of equipment. However, this does not imply that NUMSA is going into business but the union plans to use this as a platform to facilitate the formation of cooperatives where the retrenched and the unemployed youths can find jobs. According to documents analysed from NUMSA, the union argues that the mitigation plans for South Africa needs restructuring of the economy towards social and ecological transition dominated by renewable energy although it may be constrained by imposed capitalist conditions.

NUMSA leadership shows interest in the issues of green jobs through its support of the RDG group financially and also attends workshops to give their input and show solidarity. This follows the congress resolutions to pursue the climate change issues which are crucial to green jobs. The leaders show support and commitment through their willingness to use resources to assist shop stewards in building capacity through education programs at various universities. Because NUMSA believes in social movement unionism, the leaders also engage members to get feedback from the shop-floor

5.9.4. NUMSA Research and Development Group

Beyond 2012, NUMSA developed a Research and Development Group within its research department with the aim of training its members to know more about different renewable energy technologies. RDG plans to tackle the issue of the rollout of solar water heaters, electricity and energy, build a socially owned renewable energy sector, climate change and class struggles. The RDG is guided by the union's vision of a democratically controlled and socially owned energy system which is consistent with socialist concepts of organising society and production. It is aware of the class struggles and solidarity of the oppressed in different nations against those who have 'vested interests' in the energy system. RDG puts the interest of members, workers and communities at the centre of its energy work. It will take up crucial trans-generational matters based on political strategies and campaigns as well as using research to back up its claims.

Among its 7 objectives, the RDG group has asserted the following themes which it wants to pursue: Firstly is the building a socially owned and democratically controlled energy system - identify sites in municipalities and ensuring that they don't part with these; work out the meaning of socialization of energy and how to de-corporatize companies like Eskom. Again it has plans to commission a study on the role of Eskom on the continent. Engaging with ANC to declare coal

as a strategic mineral and engaging with international partners to discuss and generate ideas on key themes.

The other objective is to defend and create energy sector jobs – learning on instruments to build and defend the sector in order to tighten local content requirement; monitoring pledges of job creation made by bidding winners and ensuring women's share in the RE sector; stimulate jobs in manufacturing sector for EDI to ensure that most equipment is sourced locally.

It will also develop alternatives to rent seeking private sector energy systems – Establish SWH Coops as per resolution and encourage local authorities to form municipally owned energy companies. It will also work out a proposal with pension trustees and investment companies to set up a SORE company and monitor the tendering structure. There are also plans to learn from living socialist experiences and experiments of 20th century; conduct study tours to learn from the experiences and constraints of SORE in socialist countries. Furthermore, RDG plans to unionize energy workers, thus developing an organising database and register to ensure that workers in RE sector belong to a union especially at the construction sites and solar parks. RDG also aims at mainstreaming gender to ensure women are part of leadership.

It plans to domesticate energy as a shop-floor and mass issue – developing NUMSA approach to energy efficiency and how to deal with SA energy intensity; conduct trainings, develop mitigation plans called for in the White Paper on Climate Change and visit communities to seek their views on the development of wind mills and solar parks.

5.9.5. NUMSA Responses to Government Policies

NUMSA has made arguments regarding the government programs like the Renewable Energy Independent Power Procurement Program (REIPPP) which is mandated to be responsible for the

renewable energy projects. The union views this program as government preference in engaging with international companies than local firms. The challenges with this program is that it does not promote local manufacturing by importing the components, something which hinders jobs creation but only helps to maximize profits. The REIPPP also encourages importation of skills and technology which has an impact on the skills development of the local majority who may end up being excluded from the main economic activities of the country. NUMSA views the socially owned and democratically controlled initiatives as a way of promoting community participation. In this regard, NUMSA advocates for more space allocation for local firms in the renewable energy sector and also community involvement as the sector has less economic barriers for entry than the fossil energy sector.

NUMSA also argues that the NDP does not resonate with the Freedom Charter as it does not support social initiatives but rather neoliberal policies which are in the best interest of the capitalists. The goals for NDP are set to be reached by 2030 which is a long way for workers to wait for its fruition and this causes fears of de-industrialising the country should it pursue the NDP policies. NUMSA continues to build its capacity through training and education in order to be able to engage government on these concerns even though not much inroads have been made.

5.9.6. External Views and criticism on NUMSA's response to the Green Jobs Initiative

Much as NUMSA claims to be doing a lot about the green jobs initiatives, some officials external to it like officers at COSATU indicate that the SORE initiative is debatable since it does not spell out what 'Socially Owned" means. NUMSA is taking over companies and also facilitating the formation of cooperatives which in its view is a social initiative. But an officer from NALEDI who is outside NUMSA criticized this approach as he thinks that cooperatives

are essentially private ownership and he also questioned the operationalization of the socially owned initiatives. However, NUMSA is also following the Green Accord that the labour movements agreed with government which has spelled out the need to work together in forming cooperatives which links to the broader framework of the accord.

Again an academic participant from Wits University views the initiatives by NUMSA as a positive development in that it is a move towards socialism which belongs to the commons and is democratically controlled unlike other initiatives which ultimately lead to green capitalism. Locally owned and decentralized energy resources can benefit the majority of citizens in that they can have access to energy even when they are far away from the electricity power-lines. It can also lead to job creation for the unemployed and the youth in the country. However, the academic member criticized NUMSA that much as it is doing a lot, it is not doing much in publicizing and popularizing its initiatives for others to emulate above the bread and butter issues which are a priority to trade unions.

From the economist's point of view, NUMSA's initiatives are minimalistic in the sense that the drive to socially owned renewable energy initiatives by NUMSA excludes the idea of nationalization of crucial sectors of the economy like mineral and energy sectors. Where communities and the state own these sectors, usage will not be destructive and they will be environmentally sensitive unlike the private ownership which focuses on profit maximization and exploitation of the resources.

Some participants from COSATU and government officials view NUMSA's SORE initiatives as anti-worker in that it will slow down industrial development and lead to slow creation and loss of jobs especially in the energy intensive industries. However, the researcher sees these fears as

unfounded and unjustified as NUMSA views the initiative as another area for job creation and protection as seen by its efforts to resuscitate energy companies which are on the verge of collapsing and facilitating the creation of cooperatives. However, According to Maserumule, NUMSA seems to have a clear vision, targets and drivers on green jobs initiative as seen by its drive towards SORE and it has so far built serious alliances with CSO's and other international organisations around climate issues. This has also been made possible by its independent posture from the alliance which it has always asserted from history.

5.10 Critical appraisal of COSATU and NUMSA's approach to green jobs

From the findings of this report, firstly the leadership of COSATU seems to approach the issues of green jobs with a minimal and conservative approach as seen by the lack of aggressiveness in its response which is common in other traditional bread and butter issues. There also seems to be a disconnect between what the federation is doing on green jobs with what NUMSA as an affiliate is doing and the ability of COSATU to take green jobs as a strategic agenda for the trade union. On the other hand, leaders in NUMSA seem to show a transformative approach when responding to this issue where it has already started advocating for a SORE initiative which is based on worker and community control of renewable energy resources. This is a move to go beyond the workplace issues towards addressing community and environmental concerns. This has also been observed in the leaders' support of its shop stewards through the RDG group to study in Bolivia and Mexico on green initiatives and its presence at climate change workshops. Financially, whilst COSATU claims to lack funding for the implementation of green jobs initiatives, NUMSA has shown that the labour movement can use its financial resources like pension funds and other income to invest in these initiatives as seen by its procuring of the plants in Port Elizabeth.

Secondly, the issue of technology transfer is limited from the findings of this report. Both COSATU and NUMSA seem not to be aggressive in ensuring that its affiliates and members are empowered within a prescribed period of time to take over the manufacturing or upgrading of skills to take up green jobs. COSATU has just limited its response to high level discussions and talks with environmental and the academia while NUMSA seems stuck with its proposals. These actions may be so because the former has been embedded in political alliance with the ANC which is in government hence is unable to speak against government strategies like the increase in nuclear plants and flacking that do not support that shift towards low carbon economy. Obviously one cannot bite the finger that feeds them. Could it be that NUMSA's move out of the alliance a way to assert independence and return to SMU where green jobs issues can better be pursued? Again with the current system of South Africa's economy that is entrenched in mineral energy complex, it may be impossible to deepen the economic revolution as government is trapped in pleasing the capitalists at the expense of citizens. It is still unknown as to whether COSATU's resolution to demand the nationalisation of crucial sectors of the economy will be realised.

Another area could be that the federation should consider critically looking into the constraints that it is facing and come up with realistic means of addressing these constraints for it to fully respond to the issues of green jobs. This can be done through empirical studies that combine the impact of climate change on employment, the benefits of embracing green jobs which can help the union to advance demands for green decent jobs from an informed position. Relying on research done by other institutions like environmentalists may not address worker specific issues.

However, the question remains as to whether NUMSA's celebrated initiatives will continue after Sikwebu's move out of the education sector into the United Front programs. It is yet to be seen

how far the initiatives will sustain its local dynamics to achieve its objectives of the SORE. The other question is whether NUMSA's political program will create new challenges, absorbing it and neglecting the green initiatives and whether the union will prioritize its resources towards the SORE initiative survival.

5.11. Summary

This chapter looked at the responses that COSATU is making towards the issue of green jobs. It looked at how the union leaders and shop stewards understand the concept of green jobs and its impact on workers and communities. The responses of the federation were then looked at in detail and other initiatives that it has made so far like the education programs, how it is engaging with government in decision-making processes and how the initiatives align with government policies. The report also looked at labour's relationship with environmentalists on climate change issues which are crucial in dealing with green jobs. Next to this, the report looked at the political, social, and economic constraints that the federation faces in its attempt to implement green jobs initiatives and how it is responding to those challenges. Lastly it looked at how both leader and shop stewards of the union are embracing the issue of green jobs.

The report also presented the case study of how NUMSA an affiliate of COSATU is responding to green jobs. It also highlighted the history and political organisation of the labour movement in South Africa. To put this into context, the rise of trade unions in South Africa, the first trade unions in South Africa and trade unions and politics were also discussed. It also showed the history of COSATU, the national federation to which NUMSA is affiliated. Also the brief history of NUMSA which highlighted legacies, debates, context and strategic decisions that have shaped the union were also presented. Noteworthy are the union's ideologies, strategies, tactics and the influence of its traditions in discourse. It also identified internal management of NUMSA's

diversity emphasizing the union's innovativeness and member participation in regard to green jobs. The next chapter will present conclusions and recommendations made from the research findings.

Chapter 6: Conclusions and Recommendations

6.1 Conclusions

The study looked at how both trade union leaders and members in both COSATU as the federation and NUMSA as an affiliate in a case study understand the concept of green jobs. It investigated how the issue of climate change which is central to green jobs is having an impact on both the workers and the communities and check whether the impact is being recognised by them. The report also investigated how COSATU is responding to green jobs and asses the level of responses as to whether they are adequate or not. It also considered the federation's approach to determine whether the responses are aligning to other cross-cutting issues of green jobs. The other areas the study uncovered are the political, social and economic constraints that the labour movement is facing in its attempt to address the issues of green jobs and how it is responding to those constraints. Lastly the study presented a case study of NUMSA on how the union is responding to the issues of green jobs. The choice of NUMSA was based on the fact that the majority of its members are generally among the better skilled workers in the country and that the union is pursuing 'socially owned renewable energy' projects. NUMSA is the only union to have taken green jobs seriously making it the right union to conduct the research on.

In the first place, the study found out that despite huge gaps, there is some understanding of the concept of green jobs and its impact within workers and leaders of the trade unions in South Africa especially in COSATU and NUMSA where the study was focused on. While at leadership level there seems to be some understanding of the concept, a number of respondents at shop-floor level seem to confuse between the green jobs concept and the just transition definition which is being advocated by the labour movement worldwide. The challenge with different

levels of understanding is that it can cause the issue of green jobs to become an incidental issue without being given due attention for implementation. Again if the issues of green jobs are combined with fears of jobs loss as is the case, it may cause workers to ignore the concept or just talk more and do less about it. Obviously, climate change which is central to green jobs will impact both workers and communities and the study revealed that trade unions are now recognizing this impact as seen by their responses.

Secondly the report showed how COSATU as the largest labour federation in South Africa is responding to the issue of green jobs. The study revealed that at a higher level, the federation is actively responding to the issues of green jobs as seen by its formation of the COSATU climate change reference group which is composed of labour, academic professionals and environmentalists. The federation has also set up a climate change and environmentalist committee. Both groups aim at providing the federation with research and other technical support on climate change issues and coordinate climate change policies for the affiliates when tackling the issues of green jobs. Again in a case study on NUMSA, the study showed how the affiliate is responding to green jobs through its 'Socially Owned Renewable Energy' initiatives. It also became clear during the study that although labour is working with environmentalists and the academia, it seldom aligns its initiatives with government policies on climate change. It would have been better if both labour and government collaborate and put their initiatives together as this could help in harmonious monitoring and ensuring that such projects uphold accountability. Both the government and labour can benefit more from joint initiatives as ideas and expertise are shared which trickle down to the benefit of the majority of citizens from such initiatives.

Next the report revealed the social, economic and political challenges that the trade union is facing in its quest to implement green jobs initiatives and how it is responding to those

challenges. Politically, it was found out that while the federation is sticking to the tripartite social alliance with ANC and SACP, the alliance is inhibiting labour from aggressively advancing green jobs issues with government. However, it was indicated that COSATU can still push its green jobs agenda while in the alliance. Socially, it was found that the union is not having enormous challenges in forming alliances with professionals as well as communities. However, within the unions, there are tensions between those who support the green jobs and those who do not especially on the issues of job security as the shop stewards interviewed said that some workers fear loss of their jobs. Economically the unions expressed concerns regarding the financial challenges that hinder them from implementing the various planned initiatives. Despite this, the case study shows that NUMSA is using its investment funds to run its own projects as well as helping to facilitate the formation of cooperatives. The study also found out that on the ground the union is currently not combining the issues of social ownership with the nationalization of crucial sectors of the economy as outlined in its congress resolution. Whilst some may argue that social ownership is more of a democratic form of socialism while nationalisation of a statist, combining the two forms can benefit both workers and community at large. The benefits can emanate from employment creation as well as wealth creation through profits realised should the communities own these sectors. Politically, the study revealed the challenges that unions face in interacting with government during policy making processes. The study also revealed the different views of the impact that the tripartite alliance between COSATU, ANC and SACP is having on labour's capacity to advance workers' demands to government.

The researcher views fears of job loss to be either real or unfounded. In order to address the fears that may be real there is need to come up with proper strategic planning on the transition process

and what it will entail. Research findings have indicated that jobs in the renewable energy sectors may include the building of wind mills, wave tide and solar power facilities, the renovation and insulation of homes and offices and the provision of public transport systems. This could create 3.7 million decent jobs based on principles of ecological sustainability, social justice and state intervention as a step towards a just transition (One Million Climate Jobs Campaign 2013). This may include bringing awareness to the people and setting the proper timelines when this transition may take effect. Obviously it will take a long term for such a transition to become a reality hence there is need for government to come up with proactive policies in education, energy that will speak into the preparation. For example the Department of Education can begin to look at the curriculum revision to incorporate renewable energy as well as provide means for re-skilling workers to necessitate the shift from fossil fuels to renewable energy technologies. One of the core constitutional mandates of the Department of Environmental Affairs is to ensure that skills development programs are being conducted in the country (DEA 2012).

From the definition and understanding of the green jobs concept, the concern about job losses expressed by the shop stewards who were interviewed cannot be empirically justified. The truth of the matter, as per the empirical evidence from the research done by environmentalists like Greenpeace, is that green jobs have potential to create employment opportunities which will come from the building of infrastructure for renewable energy sector. Labour movements like COSATU and NUMSA see potential for creation of more jobs in the manufacturing sectors. The renewable energy resources can form an alternative and bring about an energy transition that opens opportunities in skills development, infrastructure and manufacturing development.

Based on the findings of the study, it is clear that the labour movement in South Africa has begun to respond to the issues of green jobs through the various initiatives as seen in the

federation and NUMSA. However, the pace of these responses needs to be increased so that the grassroots (both workers and communities) can begin to see the impact of the responses. It seems a lot has been said but little has been done by both the federation and the affiliates which shows that there are some forces at play that hinder the progress of the green jobs issues within the labour movement itself. It is noted that there are unjustified fears that implementing green jobs will affect job security and contribute to the slowing down of the economy. As long as the issues of green jobs are not tackled seriously from bottom to top, the government will not respond to worker's demands for a 'Just transition'. The solution lies in convincing the local masses that the issue of climate change is affecting them in their everyday lives and that it is real. It will now be the masses who will then push the government to respond accordingly. Of importance is the fact that the report did not measure the impact of green issues within workers but only focused on the views of key respondents and the use of participant observation.

6.2 Recommendations

There is need for the labour movement to work together with government in policy formulation and implementation of the issues of green jobs in order for the initiatives to become fruitful. Climate change as a new subject to labour requires a more simplified way of communicating to allow for debating and engagement in good faith. As long as the two continue to work in silos as revealed by the report there will be no progress on the matter. There is need to handle environmental issues together with social economic and political issues through restructuring of the economy and not to isolate them.

Again labour union leaders should begin to take the issues of green jobs seriously and ensure mechanisms are put in place to increase awareness of the issues to the workers and the community. Both the federation and the affiliate need to increase the pace at which they

conscientize workers on how to adapt and respond to the transition towards a low carbon economy as it is of paramount importance. It is therefore the duty of the leaders through the educators to ensure that workers participate in these processes as participatory democracy is one of the tenets of social movement unionism which the affiliate claims to be pursuing.

There is also the need to investigate further on the labour policies and the effects of climate change and environmental degradation on workers and communities in South Africa. The labour movement can also look at the working conditions that are related to the environment and labour which can be used in their bargaining processes.

The 'Socially Owned Renewable Energy' initiatives that NUMSA has initiated can be used as a model for other unions to emulate if the labour movement is to advance the issues of green jobs in South Africa. This is another area that will ensure that the commons are involved in tackling the issues of climate change and also contribute to the creation of green jobs. Where community participation is enhanced through the formation of renewable energy cooperatives, energy access will increase and the unemployment levels will be reduced. This will address both some of the social and economic challenges that South Africa is facing at the moment.

6.3 Issues for Further Study

This study did not look at certain issues which are also pertinent to green jobs and therefore would like to recommend them for further study. Firstly, there is need for the labour movement to conduct its own independent study on green jobs and how the issue is affecting workers in South Africa. This will enable the trade unions to make empirical arguments based on informed positions. Secondly the study did not look at the gender aspect of green jobs and its implications

on the ‘Just transition’ as it relates to changes in composition of gender that may come with the implementation of green jobs.

Another possible area for further study would be to investigate why unions like NUM which are big and within the mineral energy complex are approaching the issues of green jobs minimally unlike NUMSA.

List of Respondents

Participant No.	Participant Ref	Interview Date	Interview Place
Participant 1	COSATU Policy Framework	14/7/14	COSATU House Jhb
Participant 2	Research Dept Officer	14/7/14	COSATU House Jhb
Participant 3	Dept of Energy Officer	2/7/14	DoE Pretoria
Participant 4	Earthlife Officer	30/7/14	Earthlife Jhb
Participant 5	Greenpeace Officer	10/6/14	Greenpeace Jhb
Participant 6	COSATU Reference Groups Member	3/7/14	Wits University Jhb
Participant 7	Economist	18/6/14	Wits University Jhb
Participant 8	NALEDI Member	1/7/14	COSATU House Jhb
Participant 9	NUMSA RDG Member 2	16/8/14	Kusile Pretoria
Participant 10	NUMSA RDG Member 2	3/8/14	NUMSA Jhb
Participant 11	NUMSA ex-member	28/11/14	Johannesburg Theatre

List of Documents Reviewed

COSATU, National Congress Resolution. 2010

COSATU, 2011. *Policy framework on climate change*

Economic Development Department: *Green Economy Accord 2011*

http://www.COSATU.org.za/show.php?ID=925 Accessed on 14 August 2014

http://beta2.statssa.gov.za/publications/P0211/P02111stQuarter2014.pdf. Accessed 28 July 2014

http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_158727.pdf accessed on 28 July 2014

http://unfccc.int/essential_background/convention/items/6036.php. Accessed on 9 June 2014

http://www.ituc-csi.org/unions-and-academics-assess-the Accessed on 21 August 2014

http://mg.co.za/article/2014-03-25-7-million-killed-by-air-pollution-annually Accessed on 9 June 2014

http://en.wikipedia.org/wiki/Green_job. Accessed on 26/9/14

http://www.numsa.org.za/article/resolutions-adopted-numsa-special-national-congress-december-16-20-2013/ Accessed on 18 August 2014

http://www.world-nuclear.org/info/Country-Profiles/Countries-O-S/South-Africa/. Accessed 11/10/14

ITUC Report, 2009. Equity, justice and solidarity in the fight against climate change

NUMSA 2009 Constitution http://www.NUMSA.org.za/wp-content/uploads/2013/09/NUMSA-Constitution-2009.pdf Accessed on 9 August 2014

NUMSA- International Conference Document. 2012. *Build a Socially Owned Renewable Energy sector. Stop another capitalist grab!*

New Growth Path. 2010. *Green economic summit*.

One Million Climate Jobs Campaign 2013

UN. http://www.unep.org/greeneconomy/aboutgei/whatisgei/tabid/29784/default.aspxEP. 2007. Labour and environment: A natural synergy.

UNEP Report: *South Africa Green Economy Modelling Report (SAGEM)* June 2013

Sustainlabour 2013. Green Jobs and related policy framework. An overview of South Africa

Bibliography

Attwell, W. 2011. *Food versus fuel? State, business, civil society and the bio-fuels debate in South Africa, 2003 to 2010.* New South African Review 2. Chapter 16.

Babbie, E. and Mouton, J. (2001) *The practice of Social Research*. Oxford University Press: Oxford. Chapter 10.

Barry J. 2007. *Environment and Social Theory (2nd edition).* Ruotledge, London.

Burkett, P., 2006. *Marxism and ecological economics.* Routledge, London.

Castells, M.: 1997: *The Rise of the Network Society*: Oxford: Oxford University Press.

Chacko, E. 2004. *Positionality and Praxis: fieldwork experience in Rural India.* Washington, D.C., USA.

Clapp J. and Dauvergne P. 2011. *Paths to a Green World. The Political Economy of the Global Environment*. 2nd Edition. The MIT Press, Cambridge, Massachusetts, London.

Cock, J., 2007, *Sustainable development or environmental justice. Questions for South Africa labour movement from the Steel Valley Struggle.* Vol. 40, no. 1&2.

Cock, J., 2012. '*Ask for a Camel when you expect to get a goat'. Politics and the Climate Justice Movement(i).*

Cock, J., 2011. *Contesting the 'Just Transition' to a low carbon economy.* Global Labour Column.

Cock, J., 2011. *Green jobs a challenge to labour*. South African Bulletin.

Du Toit M.A, and Comm D. 1976. *South African Trade Unions: History, Legislation and Policy*. McGraw-Hill Book Company. Johannesburg

Eidelberg P.G. 2000. *The Tripartite Alliance on the Eve of the New Millenium: COSATU, ANC and SACP: Trade Unions and Democratisation in South Africa, 1985-1997*. Adler G. and Webster E. (eds). Witwatersrand University Press, Johannesburg, Ch 6

Fairbrother, P. 2008. '*Social Movement Unionism or Trade Unions as a Social Movement'*. Employer Response Right J. 20. 213-220.

Foster, J.B., 2001. *Ecology against capitalism.* Monthly Review Press, New York.

Foster, J.B., 2008. *Capitalism and climate change.* Monthly Review Press, London.

Foster, J.B., 2008. *Why Ecological change*. Monthly Review Press, London.

Foster, J.B., 2010. *The Ecological Revolution. Making peace with the planet*. Monthly Review Press, New York.

Foster, J.B. and Magdoff, F., 2011. *What every environmentalist needs to know about capitalism.* Monthly Review Press, London.

Friedman S. 1987. *Building Tomorrow Today. African Workers in Trade Unions – 1970-1984*. Ravan Press, Johannesburg.

Forrest K. 2011. *Metal that will not Bend*. National Unions of Metal Workers of South Africa 1980-1995, Wits University Press.

Forrest K. 2005. *Power, Independence and Worker Democracy in the Development of NUMSA and its Predecessors 1980-1995.*

Gina, A., 2009. *Opening address to the NUMSA International Seminar on Climate Change and Class Struggle, 4 December.*

Heller, P. 2001. *Moving the State: 'Politics of the Democratic Decentralization in Kerala, South Africa and Porto Alegre'*. Politics and Society. 29. 131-163.

Hindson D. 1987. *The Independent Trade Unions, 1974-1984 The Ten Years of South African* Labour Bulletin: Overview; Trade Unions and Politics. Maree J. (eds). Ravan Press. Johannesburg.

Hirschsohn P. 2007. *Union Democracy and Shopfloor Mobilization: Social Movement Unionism in South African Auto and Clothing Plants*. Economic and Industrial Democracy 2007 28: 6

Jackson T. 2013. *Foreword in Trade Unions and the Green Economy. Working for the Environment.* Routledge, London.

Macdonald, D.A., 2004. *Environmental Justice in South Africa*. Juta and Co. Ltd.

Marx E. 1894. *The communist Manifesto*

Natrus, N., 2011. *The New Growth Path: Game changing vision or cropping out?* South Africa Journal Vol. 107 no. 107(3/4).

Neuman, L.W., 2000. *Social Research Methods: Quantitative and Qualitative Approaches.* Forth edition. Allyn and Bacon: Boston. Chapter 8.

O'Connor, R., 1998. *Natural causes: Essays on economic Marxism.* Guildford Press, London.

Pillay D. 2014. *Workers Control. Marxist-Leninism and the Revitalisation of the Working class Politics in South Africa.* Labour, Capital and Society 45:2.

Pillay, D., 2012. *Marx and Eco-logic of Fossil Capitalism*

Pillay D. 2011. *Ecological threats and crisis of civilization.* New South African Review 2. Part 3.

Pillay, D., 2008. *COSATU, the SACP and the ANC post Polokwane: Looking Left but does it feel right?* Labour, Capital and Society 41:2.

Pillay, D. 1996. *Social Movement, Development and Democratization in Post-Apartheid South Africa in Coetzee J. and Graaf J. (eds) Reconstruction, Development and People*. Johannesburg international Thompson.

Rathzel N. and Uzell D. 2013. *Trade Unions in the Green Economy*. Routledge. London.

Scott M. 2014. *Climate Change: Implications on Employment. Key findings from Intergovernmental Panel on Climate Change. 5th Assessment Report*. European Trade Union Institute.

Satgar V. 2014. *South Africa's Emergent "Green Developmental State?" in The End of the Developmental State?* Williams M. (eds) Kwazulu Natal Press Pg 126-153.

Von Holdt K. 2002. *Social Movement Unionism – The case of South Africa*. Work, Employment and Society Vol 16(2) 283-304. Sage Publication.

Von Holdt K. 2000. *From the Politics of Resistance to the Politics of Reconstruction? The Union and "Ungovernability" in the Workplace: Trade Unions and Democratisation in South Africa,* 1985-1997. Adler G. and Webster E. (eds). Witwatersrand University Press. Chapter 5.

Voscko, L.F., 2002. *Decent work – The shifting role of ILO and struggle for global labour justice.*

Weiss R.S. 1994. *Learning from Strangers: The Art and Method of Qualitative Studies*. New York. The Free Press.