



MASTERS RESEARCH REPORT

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Title

The role of trade unions in advancing a 'just transition' in South Africa: A case of COSATU's perspective and approach to climate change.

by

BONGINKOSI PAUL ZULU

SUPERVISOR

DEVAN PILLAY

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DECLARATION

I, Bonginkosi Paul Zulu, hereby declare that this research report is my own original work and that where I have made use of others' ideas I have referenced accordingly.



Bonginkosi Paul Zulu

Wits University, Johannesburg, South Africa

30 April 2021

ABSTRACT

This research report analyzes the the methods through which the COSATU climate change policy was developed. The broad topic looks at the role of trade unions in advancing a ‘just transition’ in South Africa: A case of COSATU’s perspective and approach to climate change.

In 2009 COSATU took a resolution to pursue a just transition towards a low carbon and climate-resilient society. Upon adopting the resolution, the COSATU Central Executive Committee (CEC) mandated NALEDI to conduct research on climate change, looking at the impact of climate change on the workers, and also to develop a Climate Change Policy Framework.

NALEDI formed a Climate Change Reference group in 2010 which then developed a Policy Framework which was endorsed by the CEC in 2011. Following the endorsement of the policy framework, the COSATU Climate Change Policy document was developed and it was adopted at the 2012 COSATU National Congress.

The study focuses on COSATU’S perspective and approach to climate change and just transition. The aim of the study was to find out how committed is COSATU to its climate change policy and to its 2009 resolution of pursuing a just transition towards a low carbon and climate-resilient society, which was endorsed in the COSATU 2012 congress.

I explored this broad topic by looking at two aspects, namely, the policy formulation process as well as the implementation phase of the policy. This entailed looking at the actual policy formulation process and whether at the COSATU 2012 Congress the policy was debated or the climate change policy was just a project run by technocrats, and whether workers were involved in the policy formulation process, if so, to what extent were they involved. I also looked at what were the discussions on the Policy Framework on climate change; how was the Policy Framework on climate change tabled at the COSATU congress; what were the discussion prior to the endorsement the policy framework; how was the resolution which endorsed the policy framework reached; who drafted the resolution; what were the plenary discussions around the adoption of a just transition to low carbon and climate – resilient society; what were the concerns raised at plenary; why was the resolution crafted the way it was crafted; who were the people

involved in the process of formulating COSATU's policy on climate change, was it just a handful policy experts or were the trade unions involved; what were the different considerations during the actual drafting of the COSATU climate change policy document; how was the process rolled out and what were the challenges?

In this study I used ecological Marxism mixed with eco-socialism as well as 'a notion of 'an active consciousness to identify and to resist the systematic elements of fossil capitalism' as my theoretical framework. This theoretical framework was used to assess the methods through which COSATU climate change policy was developed and also in analyzing fossil capitalism as well as the just transition. In a nutshell the study found that:

- The reference group consisted of trade union officials, shop stewards, environmental organizations and academics.
- While COSATU is an independent federation of trade unions in South Africa, the resolution to pursue a just transition towards a low carbon and a climate resilient society was greatly and directly influenced by ITUC, and also by ITF (via SATAWU) who started conducting research on CO2 emissions in the 2000s.
- Issues were robustly debated in reference group meetings; members of the reference group attended seminars on the climate crisis; 3 research reports in the Mining Sector, Poultry Sector and Chemicals Sector were finalized; capacity building and information sharing workshops were held with shop stewards, where subject experts were invited to do presentations and where the content of the policy document was endorsed.
- In developing the climate change policy document COSATU followed the International Labour Organization (ILO) guidelines which are designed at helping trade unions to formulate policies. Through this process COSATU undoubtedly produced a brilliant climate change policy document.
- COSATU's position supports a deep transformative change in theory (climate change policy document) but in practice it promotes a narrow reformist transformation and little or no action has been taken to further advance the policy commitments.
- The COSATU through its climate change policy document adopted 15 principles that profess to tackle the climate crisis in South Africa and also calls for regional solidarity.

- COSATU has not taken a lead role in any of the initiatives advanced in the policy document.
- COSATU had taken a top to bottom policy approach but on the contrary, an alternative to capitalism as well as the transition to a just transition towards a low carbon and a climate resilient society have to be built by activists from the bottom-up.
- Workers were only consulted when in-depth research was done in the Poultry, Chemicals and Mining sectors, after the policy framework was endorsed by CEC in 2011 and after the Climate Change Policy was adopted in the 2012 COSATU National Congress.
- COSATU website has posted an article by Ian Angus, titled “Confronting the Climate Change Crisis, An Ecosocialist Perspective” yet eco-socialism remains a utopian project within COSATU and it has never been pursued by COSATU.
- COSATU adopted 15 policy principles in the climate change policy document. These principles are mainly COSATU ecological commitment to fighting fossil capitalism, and to pursuing a just transition to a low carbon and climate resilient economy. However, these principles have not been vigorously pursued by COSATU and its affiliates.
- COSATU currently supports the accumulative imperative.
- COSATU has adopted a minimalist approach to just transition.
- Apart from the policy document; the research in 3 sectors and few workshops conducted by the NALEDI reference group, COSATU has not given any support to affiliates in terms of just transition initiative and implementation of the 15 policy principles.
- The COSATU affiliates do not have the capacity to deal with climate change.
- The affiliate leaders not educated on climate change.
- The affiliates do not have environmental policies in place.
- COSATU supports coal jobs as well as other carbon intensive jobs.
- COSATU is still engaged in extractivist politics yet the world is busy phasing out coal.
- Some affiliates within COSATU are in favor socially owned renewable energies yet COSATU supports state owned renewable energies while some affiliates within COSATU are in favor of Nuclear energy
- Although COSATU sits at NEDLAC it has not taken the opportunity to advance any of the principles in its policy document due to its stance to defend jobs, including those in carbon intensive industries.

- COSATU seems oblivious to the metabolic rift that widens even further as a result of inaction.

On the overall the study makes some interesting empirical contributions. Consequently, the study is important not only to the labour movement but also it is important to the country as a whole, as it addresses one of the most pressing issue which faces the present generation, and which surely impact future generations. The manner in which the present generation of trade unionists, corporations and communities respond to climate change will influence future responses and the quality of life for Planet Earth's inhabitants and all ecosystems.

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INTRODUCTION CHAPTER

According to literature there is empirical evidence that the world is confronted by an ecological crisis and as a result there are inherent ecological problems such as global warming, depletion of the ozone layer, loss of biodiversity, and pollution (Mittelman, 1998).

COSATU's climate change policy document contains the following statement

There can be no 'just transition' to low carbon and climate-resilient economy without the participation and leadership of organised labour. We are central to developing solutions and preparing workers to be active in the changes. Taking up the challenge of Climate Change can be part of organizing and building unions, and strengthen labour's position to advance the interest of all workers and the poor (COSATU, 2012, p. 46).

At face value nothing worth noting has happened in pursuit of a just transition to a low carbon and climate resilient society since the 2012 COSATU Congress, thus the study pre-supposes that after the 2012 congress, COSATU had side tracked and this could have be attributed to a combination of political unionism and economic unionism, the failure to prioritize ecological concerns, a weakening collaboration between the federation and environmental organization, the federation's failure to partner with communities, the COSATU's infighting that led to the expulsion of NUMSA, the biggest affiliate at the time and other affiliates who left COSATU in solidarity with NUMSA, leading to the formation of a rivalry trade union federation, the South African Federation of Trade Union (SAFTU), or it could also be attributed to COSATU's alliance with the ruling party, or it could also be due to minimal or lack of worker participation in the development and implementation of the policy or it can simply be attributed to COSATU's leadership, including the Affiliates' National Office Bearers' lack of interest and support of environmental issues or conversely COSATU has been championing ecological issues, however this has not been recorded?

The above amounts to mere speculations, thus it was important to conduct a study of this nature, in order to understand the intrinsic dynamics (process) which led to COSATU's policy formulation. The study is critical in understanding why COSATU has either derailed from its

policy position (if indeed that is the case with COSATU) and also in understanding COSATU is progressing at a very slow pace when it comes to realizing its climate change policy milestones? The findings chapter and the concluding chapter confirm some pre-positions in this research rationale section.

It was only through empirical evidence which made it possible to unravel the reasons behind what others could have perceived as side tracking by COSATU or lack of enthusiasm to pursue a ‘just transition’ towards a low carbon and climate-resilient society, a position endorsed in the COSATU 2012 Congress.

The empirical evidence also uncovered what was the policy formulation process like, who participated and what influenced the policy decision, what were the deliberations etc. Similarly, through the empirical evidence gathered in this study, the level of commitment among COSATU’s leadership, structures and affiliates was also uncovered.

By presenting what transpired prior to the adoption and endorsement of COSATU’s climate change policy position of advancing ‘just transition’ towards a low a low carbon and climate-resilient economy and also visiting the actual policy process, including the process of implementation, the research therefore adds to the broader scholarly work on COSATU’s 2011 commitment to pursue a ‘just transition towards a low carbon and climate-resilient society and introduces a new utopian concept of *‘developing a consciousness to identify and to resist the systematic elements of capitalism’* in order to facilitate a global system change. The research also interrogates COSATU’s socio-economic stance, its commitment to a deep transformative just transition and COSATU’s Marxist or socialist position.

In a nutshell, the research demystifies why there is lack of enthusiasm or why there is no noticeable progress in the advancement of just transition towards a low carbon and climate resilient economy, pursued by the trade union movement in South Africa, since the adoption of the policy framework at the 2012 COSATU National Congress.

Essentially the reason for looking at the COSATU's policy formulation process (the methods through which the policy was formed) was to uncover how such a process could have either positively or negatively influenced the entire policy outlook within and outside of COSATU but more particularly amongst the workers, including the entire trade union movement.

Non-probability and purposive sampling was therefore utilized to select the sample (persons interviewed). The interview participants were selected on the basis of their ability to provide information that was relevant to the study rather than their representativeness (Maxwell, 1998; Neuman, 2000). All interview participants except for Mike Levington participated in the policy formulation process which involved research; policy deliberations; seminar or capacity building presentations; drafting the policy framework and the actual policy; and/or in conducting workshops to present the policy. The interview participants either participated in the climate change reference group established by NALEDI or participated in the Climate and Energy Crisis Committee which was an official structure that reports to the Central Committee of COSATU.

Access to the research site (COSATU's Policy Department and NALEDI) was granted by the respective officials who were to be interviewed. The researcher was not required to obtain official permission, however, in the case of NALEDI the researcher spoke to the current director, Hameda Deedat and she was the one who pointed out persons that were involved in the Climate Change Reference group and who would assist with the information required in the study. I then proceeded to set appointments with the required informants.

LITERATURE REVIEW CHAPTER

Introduction

This literature review chapter explores global as well as local literature on the discourse of the climate change crisis and the debates around the notion of ‘a just transition’. Noting that “the political economy of the climate crisis is an incredibly dense field” (Klein, 2014, p.399), the chapter looks at the Anthropocene argument which makes a bold claim that fossil capitalism is the primary cause of climate change and global warming. This view is shared by a number of scholars and activists. Among these scholars and activists Olaniyan (2011) contended that the capitalist notion of profit accumulation has shaped effectively every facet i.e. ideologies and policies in the modern world economy. Thus to tackle climate change requires a fundamental change of a production system that is fossil fuel driven. Olaniyan also notes that Capitalists will reject any change that will fundamentally threaten the notion of profit accumulation. Hence, the capitalist solution to the problem of climate change is far from being genuine.

Olaniyan provides suggestive insights into the incompatibility of solutions to climate change within the logic of capitalism. This Literature Review chapter therefore explores debate around fossil capitalism and various alternatives to fossil capitalism. In order to make sense of the debates on climate change; global warming and the notion of a just transition, the chapter explores the dominant debates advanced by different world views on the economics of climate crisis and how to address fossil capitalism. These views can be categorized under two main approaches as advanced by environment economists on the one hand, which include the market liberals approach as well as an institutionalists approach. The chapter then looks at the view advanced by ecological economists, which includes views by bio-environmentalist and social greens. At this point it is important to highlight that within each approach there are sub-sets for, example, ecological Marxism is perceived to be a sub-set of the social green worldview as outlined by Clark and Dauvergne (2016). Furthermore, within social greens there are other theorists, like the Buddhist who advocate wellbeing or happiness in harmony with nature, who do not necessarily identify as being Marxists. Again within ecological Marxism there are eco-socialist and so forth. Most of these theories are outlined in detail this chapter.

Noting that the measures needed to tackle climate change requires a fundamental alteration of the production system that depends largely on fossil fuel for profit. Capitalists will however resist vehemently anything that will fundamentally threaten their current basis of profit. Therefore in exploring the climate crisis discourse, the chapter also looks at theories advocated by climate deniers as well as adaptive theorists and highlights that the climate change adaptive approach is supported by institutionalists and to some extent also by market liberals as this clearly echoed in the resolutions taken at some international environment conferences, like the resolutions taken at Rio De Janeiro as well as those taken at The United Nations World Summit on Sustainable Development, held in Johannesburg and resolution taken at the Paris which culminated into a Paris Agreement) and arguably, also visible, in most governments' relaxed environmental policies.

This Literature review chapter also notes that the Paris Agreement has been attacked, by a number of scholars, on many fronts, including its failure to address the historical emission debt from affluent states. According to Satgar (2018) the failure of the Paris Agreement to regulate commitments for reductions in GHG emissions and to hold polluters liable for historical climate debt, the environmental racism will not be addressed thus 'emerging polluters, like China, will only commit and act on what suits their interests'. Satgar (2018) notes

The Paris Agreement, by contrast, provides for voluntary and nationally determined commitments, which should not be confused with nationally binding and regulated commitments. Yet there are historical and contemporary inequalities regarding carbon emissions. Some of the rich industrialised countries of the global North have been polluting since the advent of the Industrial Revolution, in the context of uneven processes of capitalist development and imperial international relations. These countries carry a climate debt. However, climate debt and climate reparations do not feature in the Paris Agreement. Instead, there is a paltry commitment of US\$100 billion from developed countries for mitigation and adaptation, which pales in comparison to the finance injected into the crisis-prone financial system. What this means is that those who have created (and continue to create) the problem, are off the hook (Satgar, 2018, p.5).

Lastly, the chapter also looks at the process of policy making for trade unions in general and ends by exploring the debates around the ecological crises and the just transition discourse in South Africa. The chapter explores a deep transformative change which pursues an alternative growth path, which involves new ways of producing and consuming. The report in general scrutinizes whether COSATU position supports this deep transformative change or just a narrow reformist transformation.

The climate science vs. climate deniers and the climate change adaptive approach

For many, the climate crisis is a complex scientific problem. At one level it is, and it is very different from daily or seasonal variability in weather. The science of climate change has confirmed, with the measurement of GHGs and in the language of the UN Framework Convention on Climate Change (UNFCCC) that ‘human induced climate change’ is happening (IPCC 2014, p. 48) cited in Satgar, 2018, p.3).

The literature on the ecological crisis exposes the ecological veracity of climate change and global warming, while science reveals that planet Earth is experiencing a climate emergency. According to climate scientists, climate change is happening here and now (Klein, 2014. p.31). The scientific evidence is proof that the ecological crisis is real, despite the conspiracy theories. Every day there is increasingly scientific evidence on the ecological crisis to dispel conspiracy theories.

The scientific evidence reveal that as a consequence of fossil capitalism, communities around the world experience hunger, disease, poverty, global warming, deforestation, air pollution, decrease in ecosystems, increase in sea levels. According to Satgar (2018) and others the ecological crises is human induced. Guerrero (2018) contends that all of these crises are a direct consequence of (fossil) capitalism. Guerrero contends that the crisis “will continue as there is no decisive measure being taken to address the climate crisis” (Guerrero, 2018, p.30).

There is also evidence that shows that the affluent and corporations gain from fossil fuel driven economy. These individuals as well as climate change deniers are not only comfortable in their

rich lifestyles but they are determined in keeping the status quo, by creating false theories and deny that global warming and climate change is real and they also reject that the world has reached a stage of climate emergency as contended by Ripple, Wolf, Newsome et al. (2020). This has led Satgar (2018) to conclude that “the global ruling classes have failed humanity and all life in the planet” (Satgar, 2018, p.8).

Naomi Klein wrote

I denied climate change for longer than I care to admit. I knew it was happening, sure. Not like Donald Trump and the Tea Partiers going on about how the continued existence of winter proves it’s all a hoax. But I stayed pretty hazy on the details and only skimmed most of the news stories, especially the really scary ones. I told myself the science was too complicated and that the environmentalists were dealing with it. And I continued to behave as if there was nothing wrong with the shiny card in my wallet attesting to my “elite” frequent flyer status. A great many of us engage in this kind of climate change denial. We look for a split second and then we look away. Or we look but then turn it into a joke (“more signs of the Apocalypse!”). Which is another way of looking away. Or we look but tell ourselves comforting stories about how humans are clever and will come up with a technological miracle that will safely suck the carbon out of the skies or magically turn down the heat of the sun. Which, I was to discover while researching this book, is yet another way of looking away (Klein, 2014, p.10).

According to Klein the affluent are prone to climate change denial. However, the science and literature suggests that in order to avoid a final environmental catastrophe, we need to preserve all ecosystems. This can only be realized when we stop harming the environment. According to Foster and Clark (2018) due to an urgent crisis presented by climate change and global warming, the struggles have moved beyond politics at the production line to include challenging capitalist expropriation and spoliation of the social and natural environment.

The literature by Foster and Clark (2010), Satgar (2018), Sweeney and Treat (2018), Park (2001), Robinson (2008) and McQuade (2019) among others, shows that the ecological crisis is real and its catastrophic effects are imminent. Unlike the climate crisis deniers, whose primary

objective is to downplay the devastating effects of the ecological crisis, these authors / scholars caution us of the danger that is imminent. According to Foster (2009)

Capitalism tends to downplay the full dimensions of the ecological crisis furthermore capitalism's impact on the environment in a process to force everything into a locked box of a specific economic crisis theory (Foster, 2009, p.129).

It is important to note that there is a substantial amount of literature and climate activists that support this view. Davis (2019) contends that if global warming and the ecological crisis continue, the world will become inhabitable. This view is also shared by numerous scholars. Davis contends that global warming is a great emergency, he points out that a the big fish will go extinct in the next fifty years as a result of plastic stuck in the middle of the Pacific Ocean. He also points out that soil is being lost really quick, especially in places like North America where they have lost 98 percent of their original topsoil and most tropical forest and rain forest have been wiped out and their constant demolition could cause a permanent droughts and this could accelerate global warming with incalculable consequences.

Unsurprisingly, Satgar concludes that "as humans we have a stark choice: end capitalism or perish" (Sagtar, 2018, p.8) whilst Foster warns against a 'catastrophic earth system change', if the conditions which produces the ecological crisis are not abolished. It should be noted that climate crisis deniers, on the other hand, stand as a barrier to finding ecological solutions that will obviate the extinction of the planet. Davis (2019) contends that this happens despite people knowing the truth about the dangers of climate change and global warming. According to Davis (2019) the rich don't want change and those in high paying jobs they don't want a change which will affected their life styles, thus they serve those who put them in those positions.

The science and the literature on the ecological crisis prove that 'climate change denialism' and the 'climate change adaptive approach' are fallacies.

Unveiling the nature of capitalism

Conglomerates are continuously engaged in activities that not only increase the exploitation of labour to unprecedented levels (Scruton, 2018) in multiple regions but also amount to over exploitation of natural resources (McQuade, 2019) across the world thus expanding the metabolic rift.

Lowy (2018) contends that the ecological crisis has always been an intrinsic part of capitalism. The debates on the writings of Marx, in the 19 century, are thus explored in greater detail in the next two sections below. It is worth noting that Lowy (2018) contends that Marx wrote, in *The Capital*

Capitalist production [...] disturbs the metabolic interaction between man and the earth, i.e., prevents the return to the soil of its constituent elements consumed by man in the form of food and clothing; hence it hinders the operation of the eternal natural conditions for the lasting fertility of the soil. [...] All progress in capitalist agriculture is a progress in the art, not only of robbing the worker, but of robbing the soil [...]. The more a country [...] develops itself on the basis of great industry, the more this process of destruction takes place quickly. Capitalist production [...] only develops [...] by simultaneously undermining the original sources of all wealth—the soil and the worker (Lowy, 2018).

Martinez-Alier and Schlupmann (1987) noted that

The irreversible destruction of fossil fuel is proceeding at a rapid pace. A heightened greenhouse effect is possibly been felt already, even though most people in the world have a consumption of exosomatic energy more typical of the period before the Industrial Revolution than of advanced capitalism. The thinning of the ozone layer is taking place at an even faster pace. The European colonization of America (and other overseas territories) became an environmental disaster. (Martinez-Alier and Schlupmann, 1987, p.xv).

The above extract from Martinez-Alier and Schlupmann shows that in the 1980s (one can also go as far as the 1960s) science and scholars were already pointing to the signs that showed the

planet is nearing its end due to the ecological crisis caused by fossil capitalism. Thus, in looking for alternatives and solution to the climate crisis, there are a growing number of scholars and activists who are advocating for a democratic socialism which is ‘eco-centrally’ orientated and different from the failed socialism (of the Soviet Union and China).

This new kind of socialism is known as eco-socialism and its fundamental objective is to restore the relationship between human and nature (Kovel, cited in Amandla Magazine, 2019). Whether knowingly or not but Sweeney and Treat (2018) supports this argument when they contend that the ‘just transition’ will require a societal shift of revolutionary proportions.

This report in answering the Research Question (RQ) also explores the extent to which COSATU and its affiliated trade unions pursue eco-socialism, particularly, since the Federation had adopted a leftist posture from its formation and because in 2009 the Federation also adopted a very progressive Climate Change Policy Framework and outlook.

According to Polanyi (1957) under capitalism everything including human labor and nature is converted into commodity status. Polanyi (1957), Burstein (1976) and Foster and Clark (2016) contend that commodification, overproduction and the endless pursuit of profit are key features of capitalism, for example, overproduction of goods and services is one of the systematic elements of capitalism which has made humans to become habitual consumers. Henceforth, Burstein (1976) contends that ‘overproduction’ is the basic feature of capitalist crisis whilst Foster and Clark (2016) contend that capitalist are on a path of narrow pursuit of profit. I therefore contend that in order to overcome these deeply entrenched systematic elements of capitalism within societies globally and also locally, what is needed is a societal shift of revolutionary proportions.

Defining the systematic elements of capitalism

A number of scholars, writers, climate and environmental activist use the terms: capitalist exploitation and abuse; unwarranted use of fossil fuels generated energy; ecological exploitation and abuse; ecological degradation; profit accumulation; private ownership; cheap labour; fossil

fuel depletion, domination; the markets and the invisible hand; technological advancement to describe capitalist greed and capitalist's use of fossil fuels which have a devastating effect on the environment and the planet. In this report these terms are grouped together and referred to as *systematic elements of capitalism* and the terms generally depict the exploitation and abuse of nature and humans by fossil capitalism.

In this study an active consciousness to identify and to resist the systematic elements of fossil capitalism is combined with ecological Marxism as well as eco-socialism (ecological Marxism and eco-socialism are discussed below) and used a theoretic framework to assess the methods through which COSATU climate change policy was developed, including analyzing fossil capitalism and the just transition.

The Eco-Marxist approach is criticized for merely focusing on the long-term transformation of society rather than suggesting short term solutions of preservation (Berg, 2003, p.137). Whilst Eco-Marxism fails to provide short term solution, this may not be viewed as a negative factor, simply because people must first be liberated from the capitalist way of life, for example, the mind set of being habitual consumers and the dependency on capitalism. Thus developing an active conscious to identify and to resist the systematic elements of fossil capitalism is a necessary step towards a regime change. Changing a mind-set of people is a long term solution which will yield long and lasting results for communities as opposed to short term solutions .that are mostly temporary solution and they never address the root cause of the problem.

It is therefore safe to conclude that the ecological crisis is a direct result of the systematic elements of capitalism i.e. private ownership, an appetite for profit, competitive markets, domination, fast production, technological advancement, exploitation of wage labor and exploitation of the environment, generating energy from fossil fuels, degradation of the environment, air pollution, disease, job losses and poverty ridden communities etc.

Molyneux (2010) contends that “if capitalist corporations and the state are the main polluters, what is needed is a social force that is more powerful than these corporations and states” (Molyneux, 2010, blog). According to Molyneux, the international working class is a powerful

force because all over the world capitalist depend on workers. He therefore contends that “without workers’ labour, the whole system seizes up, its factories, call centers, i plane, trains, lorries and shops, all grind a halt” (Molyneux, 2010, blog). In essence Molyneux contends that fossil capitalism is somehow dependent on the exploitation of workers across the globe. Thus, the rallying cries in The Communist Manifesto “workers of the world, unite” (Marx and Engels, 1848) and free themselves from capitalist exploitation. This can be achieved through developing an active consciousness to identify and to resist the systematic elements of fossil capitalism (my emphasis).

Consequently, this report also contends that the poor of the world (the workers; farmers and the communities which are affected by drought, disease, food shortages, air pollution, deforestation, the middle class) and the organizations that represent them (the climate and environmental activist, trade unions; civil groups as well progressive governments also need to develop a consciousness that will enable them to recognize the systematic elements of capitalism and to resist them.

According to Caffentizis (2013) “Marx wrote that workers would eventually become so accustomed to the rhythms and the flows of capitalist life that they would come to consider them equivalent to forces of nature”. In line with Caffentizis’ assertion, people have become so accustomed to the systematic elements of capitalism, to the extent that they have come to consider them as normal life yet these are the very systematic elements that capitalist employ in their narrow pursuit of profit.

I contend that developing such a consciousness is necessary to build an attitude of resistance and an anti-ecological destruction attitude similar to Greta Thunberg’s stance of sailing to New York City from Sweden on a zero emissions sailboat to address the UN on the devastating effects of climate change, at the age of 16 years. Through such a consciousness capitalism is then rendered powerless and ineffective.

Greta Thunberg’s stance of sailing across seas in a sailboat that does not emit carbon dioxide sends a clear message that there are alternatives to fossil fuel driven economy. Greta had

identified one of the core systematic elements of capitalism, namely, 'the unwarranted use fossil fuel generated energy' and its associated harm to the environment. Greta used this awareness to raise a global awareness around the danger of carbon emissions.

Similar to Greta's awareness raising was Michael Jackson in 2010 and Dicky Lil in 2019 where the respective artists raised awareness on the ecological crisis through song. The respective lyrics and official video of the Earth Song by Michael Jackson and Earth by Dick Lil raises awareness of the ecological crisis and the dangers of fossil capitalism. I contend that these artists, like Greta Thunberg had built a consciousness to identify the systematic elements of fossil capitalism and through song are raising an awareness that will to help people to identify and to resist the systematic elements of fossil capitalism. Again, this proves that there are numerous ways to raise a consciousness to identify and to resist the systematic elements of fossil capitalism. It could be in a form of resistance, art, music, poetry, workshops and seminar, education, public debates, social dialogue, academia, civil society and so forth.

Dominant world views on environmental economics and politics

As mentioned in my introduction above, Market liberals and Institutionalists' respective views advance an adaptive approach, which unequivocally promotes the 'economic growth' paradigm and contend that growth is a positive attribute for the environment whilst the Bio-environmentalist view as well as the Social greens' view growth as detrimental to the environment. They contend that the notion of unending or unlimited growth is flawed because unlimited or unending growth is simply not possible.

Guerrero (2018) unequivocally states that in fossil capitalism the profit accumulation, overconsumption and wasteful use of resources (which often leads overproduce and discard) are reserved for the privileged few. This view supports Davis's contention that climate deniers are mostly the rich and people with well-paying positions who defend the status quo.

It is also interesting to note that, in reality, the global environmental agenda is dictated by the Markets and institutions such as the IMF, the World Bank. Unsurprisingly, big corporations and

governments support the growth paradigm, thus the IMF and the World Bank according to Martinez-Alier and Schlupmann (1987) hold the market view and hugely depend on GDP and GNP figures to rank the countries' economic performance. This is despite all the problems associated with the GNP and GDP assessments.

According to Pillay (2020), Martinez-Alier and Schlupmann (1987) and other scholars the GDP figures hide some noteworthy variations across regions and makes not only incorrect but also false claims that the economy has performed well in the past five decades, for example, the assessment does not account for costs associated with the environment; it also does not account for work which is performed by women, and does not account for subsistence farming in its entirety. In a nutshell GNP and GDP assessments do not account for the cost of carbon emissions; depletion and abuse of natural resources; cost associated with cutting a tree or rising sea levels; poverty, disease; environmental and ecological degradation.

Martinez-Alier and Schlupmann (1987) contend that the GNP and GDP poorly and inadequately measure development and human condition because these assessments only account for things that involve the exchange of money and go through the market. However, they fail to acknowledge any work that enhances the quality of life but does not go through the market. Thus the contention that the GNP and GDP undermines work which is performed by women and subsistence farming (Martinez-Alier and Schlupmann, 1987, p.108).

According to environmental economists, market failures are regarded as negative externalities and do not count as impact on an economic activity i.e. pollution or deforestation or degradation to the environment. According to this view the scarcity of resources will force prices to go up and encourage an ingenuity to look for alternatives to replace old resources that would have become extinct.

The environmental economists believe that people have the capacity to manage natural resources effectively, contrary to the Anthropocene theory which attributes the ecological crisis to fossil capitalism. The market liberals and institutionalists believe in the environmental Kuznets curve (EKV). EKV acknowledge that economic growth may at times harm the environment but

according to the u-curve, the harm is temporary, in the long run, the economic growth will improve the environment.

Regrettably, the EKV advocates do not and possibly cannot explain how fossil fuels, which took millions of year to form, will be restored in our lifetime or even up to the third or fourth generation from now. Nor does the EKV explain how economic growth will counter air pollution and rising temperatures as a result of high CO₂ emissions or the damage to the ozone layer; the rising temperatures; the rising sea levels; dreadful disease and death related to climate change and global warming. It is these reasons, among others, that make me to out rightly reject the environmentalist economics view.

Just like the market liberals, the institutionalists also believe the economic growth in a country occurs through the functioning of the markets. The two views contend that the market is a circular flow system, which means that the corporations and the end user are mutual dependent on one another and natural resources are seen as static and infinitely available (Martinez-Alier and Schlupmann, 1987, p. 93).

Ecological economics on the other hand believe and hold a contrary view. Firstly they do not believe that the earth's resources are infinite. They unequivocally state that 'the earth is a finite resource' (Martinez-Alier and Schlupmann, 1987, p.107) and therefore see this as a natural or biological limit to economic growth. The ecological view, which is supported by the bio-environmentalist and social greens, simply contends, that the environment is not a substructure or a sub-system of the environment but it is the economy, rather, that is the subsystem of the environment or an ecosystem (Martinez-Alier and Schlupmann, 1987, p.107).

Martinez-Alier and Schlupmann (1987) notes that the bio-environmentalist and social greens contend that the GNP and GDP also do not account for things considered as negative to human conditions such as resource extraction and industrial pollution. Furthermore the GNP and GDP do not account for the state of the environment and for the preservation and or violation of human rights since it is difficult to quantify such.

Social greens call for reforms to reduce inequality and foster environmental justice” (Martinez-Alier and Schlupmann, 1987, p.227) but I contend that calling for reform within the current capitalist economic mode is akin to putting regulations in place which will still be managed and manipulated by fossil capitalist. Whilst calling for reforms may not necessarily be a bad idea. Reforms are generally temporary measures as opposed to a regime change which is a permanent fit to the problem of ecological degradation.

The social metabolism

In the 1800s Karl Marx came up with a theory of social metabolism. The term describes a convoluted relationship between nature, humans and global industrialization. Martinez Alier and Schlummann (1987), Foster and Clark (2000), Foster and Clark (2016) confirm that the infusion of the biological concept ‘metabolism’ to social systems can be traced back to Marx. Foster and Clark (2000) examined Marx’s theory of social metabolism, the dialectics of the environment as well as the capitalist system and came up with the concept of metabolic rift.

These scholars noted that Marx wrote about the metabolism between nature and mankind. Foster and Clark (2016) contend that Marx’s materialistic conception of history is innately connected to Marx’s materialistic conception of nature. Whilst Foster and Clark (2010) contend that Marx defined the labor and the production process as the metabolism of nature and the society. Foster and Clark (2016) further expanded this view when they contend that Marx’s ontology of social being’ as encapsulated by Georg Lukacs was rooted in the conception of labor as the metabolism of society and nature. According to this view, human-material existence is both social-historical and natural ecological” and this was the core philosophy of Marx, thus his theories of the universal metabolism of nature; the theory of social metabolism and the theory of metabolic rift (Foster and Clark, 2016, p.1).

The term 'metabolic rift' which is also used unsparingly and uncompromisingly in this report explains the rift that is created by capitalism in the relationship between society and nature (social metabolism). This rift occurred as a result of the commodification process which its sole objective is profit accumulation (as this sits at the core of the systematic elements of capitalism).

Foster and Clark (2016) refer to the commodification process as commodity production where labor and land are reduced into a 'commodity-like status'. The metabolic rift is therefore akin to what Marx described as the alienation of both the worker and soil as a consequence of capitalist accumulation. Foster and Clark (2016) also contend that when young Marx commented on James Mill's 'Elements of Political Economy' he referred to the metabolic rift as the "alienated mediation" of "human species-activity" under capitalism.

Foster and Clark (2016) also contend that "by the very fact of its active engagement in labor and production, humanity is also involved in the social metabolism of human beings and nature, and in the formation of a "second nature". According to Foster and Clark (2016) Marx believed that the rise of capitalism introduced commodity production and the continual pursuit of profit accumulation. In this new labor intensive process private property and wage labor separated not people from the productive process, and it also alienated nature itself.

According to Foster and Clark (2016) the rift is increased even further as a result of capitalist intervention, such as carbon capture and sequestration, which proves to be ineffective because these interventions do not address the roots of the ecological problem. This is well encapsulated in the Independent Socialist Magazine, monthly review article:

Capitalism is only able to switch ecological contradictions around, it eventually create a wider rift in the universal metabolism of nature, with effects far beyond the immediate processes of production, raising the question of capitalism's far absolute limits. It is this framework that constitutes the core of Marx's ecological crisis theory, with its emphasis on the anthropogenic-metabolic rift engendered by the system of production. The result is ever wider and deeper ecological challenges and catastrophes, representing the ultimate market failure of the capitalist system (Foster and Clark, 2016).

Grindin (2018) contends that the notion of metabolic rift exposes capitalism for really what it is, the rift itself. According to Grindin

Capitalism dematerializes the economy so that people are hypnotized by the trade in imaginary currencies and now, digital goods, while forgetting the inescapable material

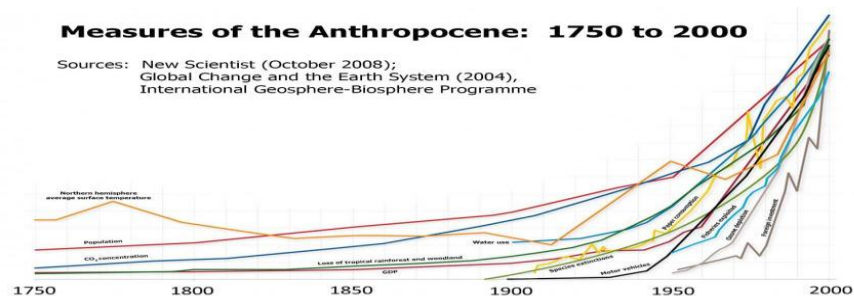
economy in which we live (also known as the ecology) (Grindin, Matthew, Aug 3, 2018. What is Metabolic Rift? www.medium.com).

The metabolic rift therefore must be seen as a tool for analyzing the material contradictions between men and nature. Consequently, the application of Marx's ecology to our modern day society is imperative. Eco-Marxism or Marx's ecology (as commonly known) therefore plays an integral part in today's eco-politics as we seek to address the ecological crisis created by fossil capitalists.

The critique of Marx's ecology

It is also important to note that according to Foster and Clark (2016) Marx's writings in the 1800s was not only about the political economy but it was also about the natural-scientific revolution that was taking place during his time. However, within Marxism not everyone agrees with Marx's ecology theory, some Marxists deny that Marx even cared about the environment.

Lalucq (2013) contend that Marx was the first to mark the difference between renewable and non-renewable resources yet Marx downplayed the impact of human activities upon natural resources. Lalucq argued Karl Marx was not enthusiastic about nature unless it involved farming.



The sharp upward spike in all of the trends displayed on this graph show how human activity has increased since the Great Acceleration.

Whilst literature reveals that within Marxism there are Marxists who oppose eco-Marxism and believe that Marx downplayed the impact of human activities on natural resources, like Lalucq, these critics fail to acknowledge that it was Marx who first acknowledged the social metabolism between nature and men and that Marx' writing on the Capital does not only challenge the

capital exploitation but Marx writings also exposes the metabolic rift between humans and nature.

Foster and Clark (2016) contend that after writing the *Capital*, Marx became increasingly concerned about the ecological crisis. It is therefore argued that the narrow analysis of Marx's work by some Marxist leads to misrepresentation of Marx's conception of capitalism, society and nature and this narrow analysis also derails Marxist from uniting ideologically, in order to strategize on how to collapse capitalism. Thus, Pillay (2020) contends that humans must break away from the 'traditional state and market development debates' and look for avenues to subordinate both the state and the markets to a society that is in harmony with nature'.

It is for this reason that Foster and Clark (2016) re-examines Marx's theory of metabolic rift to refine Marxism and the ecology of today. In *The Capital*, Marx spoke of the spoliation of the Earth and the Soil. Therefore, Marx's critique of capitalism according to Foster and Clark (2016) was not only about capitalism as a system that only exploits labor power but Marx also contended that capitalism undermined "the original sources of all wealth which are the soil and worker. This view was also supported by Harribey (1997) who noted that according to Marx, capitalism exhausts "at the same time the two sources from which all wealth flow: the earth and the worker" (Harribey 1997,126 cited in Lalucq, 2013).

According to Foster and Clark (2016) after reading 'the botanist Carl Fraas's studies of the destruction of the soil and desertification over the long history of class-based civilization', Marx argued that this process has in many ways only intensified and expanded under capitalism-and had consequently become "irreparable" under the modern system of alienated labor-production. From this Marx concluded that the ecological destruction under capitalism represented an "unconscious socialist tendency" in the sense that it pointed to the need for a revolutionary break with the system (Foster and Clark, 2016).

It should be understood that the unconscious socialist tendency to pursue a revolutionary break away from the capitalist system is a direct natural response to restore the social metabolism between humans and nature. Pillay (2011) contends that

Traditional Marxist groups need to revise their approach towards ecology, and the environmental groups likewise need to see the interconnections between the environment issues and capitalism as an economic system (Pillay, 2011, p.147 in Social Theory for Trade Unions in South Africa).

According to a number of scholars, including Satgar (2018), Foster (2015), Robinson (2008), Foster and Clark (2016), Park (2001), McQuade (2019), Sweeney and Treat (2018) and others, the human species faces extinction if the ecological crisis continues, unless the transformation of the political economic system is realized, at a global scale. Whilst Parenti (2013) and Foster (2015) warns of the 'revenge of nature' an analogy similar to the one used by Engels referring to what Foster called a 'catastrophic earth system change', if the conditions which produces the ecological crisis are not abolished.

it is interesting to note that there are schools of thought that calls for the total transformation of the current political economic system as well as other schools of thought that seek to explore adaptive strategies within the current political economic system and there are climate deniers. As mentioned in the preceding section these schools of thought can be grouped together under either environmental economics view, which is advocated by market liberals and institutionalists. This group supports the adaptive approach and some of the theories advanced by climate crisis deniers. The second group of scholars is the ecological economists, who are mainly supported by bio-environmentalist and social greens. The latter group of scholars is anti-capitalist. Together these views are known as the four world views which dominate the global debates on the economic growth; wealth; poverty and ecology. These are the market liberal's view, institutionalists view, bio-environmentalist view as well as social greens view. It is important to note that the ecological -Marxist are aligned to social greens.

As already mentioned, in this study I will be using the ecological Marxist approach as well as eco-socialism combined with an active conscious to identify and to resist the systematic elements of fossil capitalism, as my theoretical framework, in assessing the Anthropocene discourse and also when analyzing and interpretations of the "just transition". Since Ecological-Marxist

approaches are one variant of eco-socialism, whilst anarchism is another intellectual current amongst eco-socialism. As a result Ecological -Marxist lends itself to eco-socialist alternatives.

The destruction of ecosystems vs. the need to preserve them



In his environmental critique of the capitalist system Karl Marx wrote about material metabolism where he describes nature as the genesis or the root source. According to Rolston III (1997) humans can only know “nature with a human face”, never nature as it is in itself (Rolston III, 1997, p.363) whilst Kovel (2014) contended that “as we are part of nature, so do the “connections” connect us as well in ecosystem”.

According to Richards (2019) "each part of the ecosystem is important because ecosystems are interdependent". According to Richards (2019) “a damaged or imbalanced ecosystem can cause many problems”, whilst Anderson (2015) argues that as the world population grows, our dependence on healthy ecosystems also grows because ecosystems sustain life. Anderson (2015) noted that

Ecosystems are important for air purification, sequester carbon for climate regulation, cycle nutrients so that we have clean drinking water without costly infrastructure and pollinate our crops so that we don't go hungry".

Foster and Clark contend that “all ecosystems on the planet are now in decline. Enormous rifts have been driven through the delicate fabric of the biosphere. The economy and the earth are headed for a fateful collision- if we don't alter course” (Foster and Clark 2010, p.1).

The core of Foster and Clark's argument is that the only way to avoid an environmental catastrophe is to stop fossil capitalist driven consumption and avert the destruction of the ecosystems. It must therefore be unequivocally noted that such a change requires a complete overhaul of the political economy. Different scholars like Foster and Clark (2016) believe that the capitalist logic of production is the root of the ecological problem. This report support this view and advocates for democratic eco-socialism that is premised on eco-Marxism ideals, as an alternate to fossil capitalism.

It is important to mention that the global perspective on environmental crisis contends that most of the serious ecological problems are global thus they require a global solution (Park, 2001, p.3). Guerrero (2018) noted that a 2012 report by the Climate Vulnerable Forum states that five million deaths occur annually from air pollution, hunger and disease as a result of the ecological crisis and carbon intensive economies. She contends that this death toll increases to six million annually, if the current utilization patterns of fossil fuel continue and more than 50% of the total deaths will occur in the South (Guerrero, 2018, p.38).

Literature and science therefore highlights the importance of preserving ecosystems, for example, Anderson (2015) and Richards (2019) contend that ecosystems are significant for survival of humans and other species. However, according to Foster and Clark (2010) fossil capitalism undermines nature and now ecosystems are in decline. Consequently, eco-socialism remains one of the few hopes of restoring the metabolic rift between nature and humans. Thus there are growing calls for a just transition across the globe. Lowy (2018) notes

The struggle for green socialism in the long term requires fighting for concrete and urgent reforms in the near term. Without illusions about the prospects for a “clean capitalism,” the movement for deep change must try to reduce the risks to people and planet, while buying time to build support for a more fundamental shift. In particular, the battle to force the powers that be to drastically reduce greenhouse gas emissions remains a key front, along with local efforts to shift toward agro ecological methods, cooperative solar energy, and community management of resources. Such concrete, immediate struggles are important in and of themselves because partial victories are vital for combating environmental deterioration and despair about the future. For the longer term, these

campaigns can help raise ecological and socialist consciousness and promote activism from below. Both awareness and self-organization are decisive preconditions and foundations for radically transforming the world system. The synthesis of thousands of local and partial efforts into an overarching systemic global movement forges the path to a Great Transition: a new society and mode of life.

The above extract raises two debates. One debate that says, on the one hand, in the pursuit for green socialism, socialism cannot co-exist with capitalism, and on the other hand, a debate which suggest that, if environmental reforms are happening within capitalism, notwithstanding that reforms are not a revolution and offer short to medium term solutions, can such reforms be counted as partial victories for socialism, in pursuit, of the greater struggle for complete eco-socialism? (Lowy's view) and can socialist concede to the fact that a revolution does not happen overnight or a war is worn through victories in battles? These are questions that eco-socialist must vigorously debate, and come up with feasible action plans aimed at finding short, medium term to long term solutions.

It is important to note that eco-socialism Satgar (2018) contend that “the Paris Agreement reflects a balance of forces in favor of greening capitalism” (Satgar, 2018, p.8). This simply points out to the fact that green capitalism and green socialism are two systems with different objectives. The Paris Agreement was a clear victory for green capitalist.

Foster (2015), Foster and Clark (2016), and Parenti (2013) what we are now experiencing i.e. climate change; global warming, deforestation, pollution, rise in sea levels, excreta, is merely a ‘retaliation of nature’ / ‘revolution by nature’ against fossil capitalism. It is on this premise that Green capitalist have emerged and are seen to be responding to the ‘revolution by nature’ which has just begun. Climate scientists warn against the worst that still has to come. Satgar (2018) notes

In the most recent study done on this and cited by Bill McKibben (2016), the conclusion is simple: keeping temperature increases below 2°C requires zero extraction of fossil fuels. We have reached the limits of drilling, digging and extracting if we want to survive. More shocking is the silence of the Paris Agreement about carbon corporations

and the need to restrict their activities, even as a minimum gesture to incite hope and encourage a global shift away from fossil fuels (Satgar, 2018, p.8).

It is clear from the literature explored thus far that the objectives of the capitalism and those of democratic eco-socialism are materially at odds with each other. Lowy unequivocally notes that for green socialist, there is no misconception about clean capitalism. It is clear to green socialists that clean capitalism does not exist, it is an illusion. Capitalist contend for concrete and urgent reforms. Once these are passed into legislation, it becomes business as usual for capitalist. Reforms only buys time for Capitalist, they don't end or solve the ecological crisis.

Both green capitalist and green socialist feel that they are in a revolutionary cause. Lowy (2018) contends that eco-socialism is part of an international revolutionary movement that seeks ecological justice and it interphases with other environmental movements in a common struggle. Lowy further contends that a “global ecological, economic, and social crises know no borders, the struggle against the systemic forces driving these crises must also be globalized” (Lowy, 2018, essay). Whilst green capitalist, on the other hand, have introduced the green new deal as the “green revolution” as it advocates for clean coal, clean nuclear, increase efficiency in energy use, decoupling. However, on closer analysis of the green new deal, it just translates to a continuation of fossil capitalism.

Whilst moving away from fossil capitalism seems ideal. There are two dominant schools of thought on this issue. The one school of thought suggests that a transition to low carbon economy is possible within the current economic system, while the other school of thought talks about a just transition away from fossil capitalism. Scholars have written extensively on the notion of a just transition to low carbon economy. The term is widely accepted but different meanings have been attached to it, thus it is widely debated.

The just transition discourse

Sweeney and Treat (2018) contend that the pursuit of ‘just transition’ initiatives and policies has since intensified. There is a voluminous literature on ‘just transition’, since its first official

citation in the Paris Agreement in 2015 and there are also variations on what ‘just transition’ means.

The term ‘just transition’ is basically used in mainstream climate change debates, by various organizations and formations, the list includes governments, NGOs, indigenous groups, the United Nations, trade unions, feminist groups, businesses and philanthropists, among others. Different groups associate the ‘just transition’ with different things. Different understandings of ‘just transition’ also reflect actors’ broader political and ideological beliefs (Goddard and Farrelly, 2018; Barca, 2015a).

Sweeney and Treat (2018) argue that ‘just transition’ has gained a firm grip in the global policy discourse. According to these authors, the International Trade Union Confederation (ITUC) succeeded in putting the phrase ‘just transition’ into the preamble to the Paris Climate Agreement, negotiated at COP21.

According to Sweeney and Treat (2018) the phrase ‘just transition’ captured the idea that workers should not have to make an election between making a living and harming the environment through their daily work. Furthermore the living standards should be protected in the event that jobs are terminated as a result of environmental policies (UNFCCC, The Paris Agreement, 2015).

Noting that a December 2018 ‘just transition’ research collaborative report records that the ‘just transition’ debate has brought together a wide range of stakeholders and views relating to the debacle of climate change and the proposed path to low-carbon development.

Similar to the debate made by Goddard and Farrelly (2018) and Barca's (2015a) the just transition research collaborative report also notes that the different stakeholders do not share the same idea of what a ‘just transition’ should look like, or in what form it should be accomplished. On this note Cock (2018b) contends that

There is no blueprint for a democratic just transition away from fossil fuel capitalism. Such an alternative has to be built from the bottom up in a process of democratic

participation led by the labour movement. At present the idea of a just transition is an empty space—it is up to us to give it content and strategic direction. Change is inevitable. As Jason Moore writes, "Capitalism will give way to another model—or models—over the next century". Our challenge is to ensure that the change is just.

The just transition' research collaborative report also acknowledges the argument advanced by some scholars, that whilst others have adopted the concept of 'just transition' and its language, they are not aware of its social and environmental justice origins. The report therefore advocates for a progressive interpretation of 'just transition' that can foster transformative change and climate justice for all. The report also provides an analytical framework which will help to interpret and compare different framings of 'just transition'.

As a result the concept of 'just transition' is sometimes associated with demands that range "from a simple claim for job creation in the green economy, to a radical critique of capitalism and refusal of market solutions" (Barca, 2015b, pg. 392). This view was put forward by Scholtz (2011) who noted the definitions of 'just transition' range from a list of demands which advocate for fair treatment of workers in the climate change mitigation and adaption policies and action, to recognizing that 'just transition' as the opportunity to design a new political economic model.

The ITUC's approach is concerned with labour-related and workplace-related issues and this approach to 'just transition' is shared by a number of national unions. This worker and workplace-centered approach is also reflected in the ILO's 'just transition' Guidelines of 2015 which calls for skills development, proper Occupational Safety Measures, the protection of rights in the workplace, social protection and social dialogue (A Report of The 'just transition' Research Collaborative, pg. 13).

Sweeney and Treat (2018) contend that what unions mean by just transition has changed over time, and how these different meanings have shaped strategic decision, especially in terms of approaching or selecting allies and partners. The term "just transition" according to Sweeney and Treat (2018) is used to describe a broader and deeper socioeconomic transformation which is a societal shift to "a sustainable, low-carbon economy," or "a zero carbon world" over a period of

several decades. these scholars contend that the trade union debates at the global level have not always paid close attention to the distinction between narrow reformist shift to “a sustainable, low-carbon economy,” or “a zero carbon world”. Sweeny and Treat (2018) contend that many trade unionists do not appreciate the implications of the difference between reformist change and regime change.

Cock (2012) seems to agree with Sweeny and Treat as she contends that, at present, a point of contention among trade unionists involves the substantive content in the notion of a ‘just transition’. Cock makes a distinction between ‘paradigm shift’ and ‘regime change’ within the context of ‘just transition’.

According to Cock (2012) there are two broad approaches to the notion of a ‘just transition’. The latter approach advocates for transformative change which is an alternative growth path and involves new ways of producing and consuming, whilst the paradigm shift, advocates a shallow, reformist change with green jobs, social protection, retraining and consultation. Cock explains that paradigm shift entails a change in ways of thinking about the issue, which could be ‘thin’ or minimalist, whilst a ‘regime change’ implies a fundamental transformation in the way power and resources are distributed, and economic activities are regulated and controlled (Cock, 2012). According to Cock (2012) ITUC advocates for a paradigm shift, however, in South Africa, the South African Municipal Workers Union (SAMWU) which is an affiliate of COSATU, supports a regime change.

Sweeney and Treat (2018) also calls for a social dialogue on worker focused transition and socio-economic transformation, within the international trade union movement, noting the following:

But pointing to the limitations of Social Dialogue and its association with the faltering “green growth” approach does not alone generate an effective alternative. Developing such an alternative is the collective responsibility of the international trade union community and its allies. The effort to develop and articulate a bold and expansive “economy-wide” vision of what is possible and necessary for a Just Transition a vision that integrates immediate worker concerns with the drive for a broader and deeper

socioeconomic transformation can inject fresh urgency into debates both within the international trade union movement, and between unions and their allies in other social movements. In this way, the pursuit of a Just Transition could also serve as an energizing focal point for organizing and mobilizing, both inside the formal trade union movement and beyond it, to a wide range of crucial allies and broader social forces. The arguments presented here are intended to make a positive contribution to that vitally important task.

Importantly, throughout the world there is emerging social power movement in the form of climate justice activism. In South Africa organizations such as Green Peace, Extinction Rebellion, EarthLife religiously pursue climate justice through their various diverse campaigns, all aimed at driving awareness on the catastrophic effects of climate change and the systematic elements of ‘fossil’ capitalism. Such campaigns are key in the development of a consciousness to identify and to resist the systematic elements of capitalism. Trade unions must join such campaigns and build an active consciousness to identify and to resist the systematic elements of capitalism among the workers and their constituents.

Trade union policies and environmental issues

According to Sweeney (2003) initially the number of trade unionists attending the COP meetings was minimal and their attendance was largely to observe and to gather information. Sweeney (2014) on the other hand notes that at the infant stages of the United Nations Framework Convention on Climate Change (UNFCCC) the climate debate was dominated by neoliberal thinking and unions were in no real position to challenge either the mechanisms used or the deeper ideological assumptions behind the climate debate because the inadequate capacity for unions to project a distinct voice in a room filled with other players such as corporations, NGOs and governments was a major challenge and remains a challenge to this day, despite growing union participation..

Notably, today one of the biggest obstacle facing the trade union movement, globally, is that when it comes to environmental issues, the environmental policies of trade unions (for the very few unions that have policies in place) are at different points of departure and this is due to

different national histories, their sectorial anchoring, their membership strength and political convictions (Rathzel and Uzzel, 2013).

Sweeney and Treat (2019) argues that, in order to effectively pursue connected demands for worker-focused transition and for socioeconomic transformation, the international trade union movement must collectively formulate and then pursue a comprehensive, integrated approach because for the ITUC, a broad socioeconomic transformation is urgent and necessary. They also contend that it is the responsibility of the international labour movement to steer social dialogue for the ‘just transition’ to a low carbon economy.

Most scholars contend that “it is no longer a choice of either the environment or jobs. It must be both or we face a specter of neither” (Ward, 2008). According to Cock (2019) a ‘just transition’ away from capitalism is not a nice to have, it’s imperative. Whilst Sweeney and Treat (2018) contend that whilst world leaders agree that the transition to a low-carbon economy is unavoidable, the major trends from governments still support and promote the global fossil driven economy.

All of these scholars and others who are discussed in this chapter highlight the climate emergency thus the need for the just transition. Sweeney and Treat (2018) also points us to the intrinsic danger presented by governments, globally, as they whole heartedly support fossil capitalism. This is undoubtedly a major obstacle to the just transition discourse as well as the realization of climate justice.

Thus Sweeney and Treat (2018) contend that the transition to a low carbon economy won’t happen without a radical restructuring of the global political economy and the likelihood of that happening is nil. Sweeney and Treat (2018) contended

Statements that suggest the transition is “inevitable” are especially remarkable given that, if anything, key trends are going in the opposite direction: more fossil fuels are entering the global energy system, more pollution and more emissions are being released, climate instability is increasing, and the degradation of ecosystems is accelerating.

Sweeney and Treat (2018) further contend that for some unions, they pursue Just Transition just for their ideological content in that by supporting the “green growth” agenda, they can stay on familiar territory, and in so doing hope to breathe new life into the Social Dialogue narrative. According to Sweeney and Treat (2018) Social Dialogue can encourage green growth which is nothing other than “managed” capital accumulation.

It is important to note that despite the enormous efforts by capital to disguise the real character of fossil capitalism by introducing the green economy. There are an increasing number of scholars who are now rejecting capitalist notions such as the green jobs, green capitalism, the green economy as well as the shallow reformist change.

The climate justice scholars and activist see the climate crisis as immediate and require a real urgent response and not jobs which still propagate capitalist agenda. Lowy (2018) contends that “The political forces committed to the capitalist “market economy” that have created the problem cannot be the source of the solution”. He argues that a typical example would be the Paris agreement where there were commitments to keep average global temperature increases below 2° C (ideally, below 1.5° C) however, there were no enforcement mechanisms put in place nor there are any consequences for noncompliance, hence no guarantee that any country will keep its commitment. Consequently, the global temperature has increased to close to 5° C.

According to Sweeney and Treat (2018) the dominant “green growth” agenda is increasingly being called into question.

Unions for the most part understand that they must strive to develop a Just Transition politics that somehow addresses the concerns of the here-and-now (worker-focused transitions) in ways that also keep the need for a transition of the entire economy in the forefront (socioeconomic transformation). This is because a transition that is “just” from the perspective of workers or “the workforce,” but which fails to advance or help achieve the needed socioeconomic transformation, will ultimately achieve little in the light of climate-related and broader ecological concerns. Alternatively, policies aimed at driving a socioeconomic transformation that are (potentially) robust enough to achieve climate and environmental targets (such as those adopted in the Paris Agreement), but which

ignore the impact on workers in specific locations or industries, risk being unable to secure the kind of social and political support from workers that such a transformation will need in order to be successful.

Scholtz, 2011 argued that it is crucial to first understand the structural dysfunctions of the current economic model before developing policies that facilitate just transition because failure to do so will result in failure to deal with the root cause of “unsustainability and inequality. Thus, I contend that workers and communities need to identify and resist the systematic elements of capitalism in order to develop policies that facilitate just transition away from fossil capitalism.

In order to combat another capitalist agenda such as green growth, the trade unions, must be real and must not only be part of the social dialogue but they must spearhead the just transition agenda, conduct extensive research on products and services that are ecological harmful to the environment, workers and the community, come up with alternatives to fossil capitalism, get workers on board, partner with environment groups and communities. This view is supported by a number of scholars, including Morena and Cock.

According to Cock (2019) labour must first own the process of just transition; undertake research on alternative jobs, job creation and formulate clear demands on the state. Labour should also reject the capitalist’s packaged notions such as ‘sustainable’; ‘green capitalism which bring efficiency of the markets that exploits nature and workers (Cock, 2019). Meanwhile Morena (2015) contends that the ‘just transition’ also epitomizes a way of mainstreaming environmental issues within the trade union movement and also a way to partner with other patrons, such as the environmentalist and also other actors engaged in the international climate debate.

Cock (2019) talks of transformative ‘just transition’. This is a transition that is just and democratic; a transition that seeks a total transformation of the political economy away from capitalism; a bottom up process that will lead to a democratic participation led by trade unions. I contend that an eco-socialist mind set with an active consciousness to identify and to resist the systematic elements of capitalism is what is required to implement a transformative just transition.

According to Cock (2019) the red/green alliance could be a powerful driver of transformative 'just transition'. For example, the environmental organizations can lead campaigns on preservation of the environment whilst trade unions lead similar campaigns on sustainable jobs that will prevent harm to the environment, to the health of the workers and the community.

It is important to note that the red/green alliance is vital component of achieving ecological justice. The environmental organization have conducted extensive research on environmental degradation at the hands of fossil capitalism whilst trade unions are in a much better position to exert pressure on the captains of industry, concerning harm to the environment. However, this will be made possible if trade unions will adopt environmental policies, pursue such policies and move away from collective bargaining that only promotes economic and political unionism.

A stronger red/green alliance (explore in detail below) requires a people that have developed an active consciousness to identify and to resist the systematic elements of capitalism. I contend that trade unions must have an anti-capitalist attitude backed by environmental policies, followed by policy implementation, evaluation and monitoring.

The International Labour Organization has set guidelines to help trade unions to formulate policies. These guidelines facilitate a structured, coherent, democratic and transparent policy formulation process. According to the ILO there are seven crucial stages that trade unions must observe when developing policy. These are Preparation, Issue identification, Formulation, Adoption, Action planning, Implementation and Monitoring and evaluation (ILO, 2015(b), p.vi - vii).

Types of Unionism in South Africa and the concept of Just transition

It is imperative to explore different types of trade unions and how trade unions grapple with the ecological crisis and the concept just transition. Pillay (2020) makes this distinction quite easy. He contends that there is economist unionism which is preoccupied with economic redistribution through bargaining relationships with employers. Political unionism is submerged with pursuing

economic redistribution primarily through political parties and state mechanism. Pillay (2020) contend that in this kind of unionism, is where the gains of collective bargaining are supplemented by a substantial social wage which include free or heavily subsidized housing, public transport, education, health care etc.

The Social Movement Unionism (SMU), on the other hand, relies on class alliances and social mobilization to achieve both the workplace and broader societal redistribution of wealth (Pillay, 2020, p.3). Pillay (2020) contends

In other words, social movement unionism, as an ideal type, has sought to subordinate both the state and the markets to a democratically organized society, to achieve equitable social outcomes – a form of democratic-socialist working class politics, where unions retain their independence from parties and the state” (Pillay, 2020, p.3).

Pillay (2020) also makes a distinction between anti-systematic SMUs and social justice SMUs but contend that both types are ideal and “display characteristics of internal democracy and operational independence, class alliances which support workplace politics and broader social class struggles” (Pillay, 2020, p.3).

Pillay (2020) contends that statism (dominance by the state) happens either through social democracy or state socialism (Marxist Leninism) and in either case trade unions succumb to statism, thereby losing their autonomy to the state and to political parties.

Essentially, Pillay (2013), Pillay (2015) and Pillay (2020) make a distinction between social movement unionism, economist unionism and political unionism. This distinction according to me is important because depending on a particular stance or position a trade union takes, one is able to tell if that trade union is concerned with the ecological crisis or not, for example, in South Africa there are no ecological trade unions, as yet. I also contend that preoccupation with general politics, restrictive collective bargaining and statism clouds the trade unions judgment when it comes to critically analyzing and challenging fossil capitalism. Their focus is restricted to economic bargaining.

Pillay (2015) contends that the National Union of Metalworkers of South Africa (NUMSA) a former affiliate of COSATU once had two notable moments; one was an ecological moment where NUMSA led the trade union movement into paying attention to the climate change crisis; it explored renewable energy and green jobs as an alternative.

Pillay (2015), Pillay (2020) had noted that this initiative by NUMSA could potentially move the trade unions' focus from collective bargaining (unionism) to a social movement unionism that will focus on broader issues involving capitalism and its natural limits to growth. According to Pillay as time passed NUMSA lost this moment when it reverted back to political unionism and economist unionism. Pillay (2015) noted that the NUMSA's intention at the time, which has since materialized, was to form a Marxist Leninist political party, and this was going to deter the trade unions' ecological moment.

The second Numsa moment according to Pillay was when Numsa took a decision in its 2013 Special Congress to not support the ANC financially but to pursue a United Front of progressive organizations and a Movement for Socialism, which was later launched as the Socialist Revolutionary Workers' Party (SRWP) in 2019. According to Pillay (2015) this Numsa moments could be perceived as NUMSA returning to its original self as a social movement organization but as things turned out this was not the case. This can be attributed to a number of reasons including political orientation and political ambition, and/or social and economic interests and / ideological pursuit and/ or statism.

I contend that in South Africa political unionists are often co-opted into government ministerial positions, like in the case of Mbazima Shilowa (former COSATU general secretary) who became the Premier of Gauteng. Siduma Dlamini (former COSATU President) is currently the Deputy Minister of Agriculture, Land Reform and Rural Development. President Cyril Ramaphosa was the former general secretary of the National Union of Mineworkers (NUM), Whilst William Mothiba Madisha a former President of COSATU and South African Teacher's Union (SAFTU) though expelled from those positions, and he later became Member of Parliament from 2009 to 2019 and is now affiliated to Congress of the People (COPE). Gwede Mantashe the current minister of Mineral Resources is the co-founder of NUM and rose within the trade union ranks to

prominent ANC positions. The current minister of Labour Thulas Nxesi is a former trade unionist. The list of political unionist co-opted in government positions is endless.

I also contend that one of the major downfall of being a political unionist is that a political unionist is not in a position to critic the political party they are affiliated to or the government problematic legislation and/or policies if the party is the ruling party or part of government. This may be so because of either political ambition or political affiliation or political party alignment.

At this stage it is important to highlight that many scholars have made a distinction between variants of socialism. Satgar (2018a) contends that the South African socialist tradition are limited and inadequate to address the ecological crisis, for example, the ruling party (and to some extent, according to me, even most leftist trade unions who claim to be on the left) have adopted a diverse socialist orientation or dogmas, namely, Sovietized socialism (Trotsky's minimum programme); revolutionary nationalism and social democracy.

Satgar contends that these socialist dogmas are often theorized by political parties / trade unions yet there are major challenges associated with these socialist dogmas. Firstly, they fail to acknowledge eco-Marxism or the metabolic relationship between nature and humankind. This means the socialist can't make capital to account for the ecological destruction. Secondly, they can't hold capital to account for the cost to nature in the production process meanwhile labour is 'priced'. Thirdly, the so called socialist are 'productivist' who are obsessed with endless growth. Fourthly, these so called socialist are also obsessed with technological advancements despite the intrinsic class relations which is embedded in technology.

According to Satgar for business science and research is associated with profit, the example he cites is the genetic engineering of seeds which has a destructive effect both on humans and on nature. He contends that carbon capitalism (fossil capitalism) is anti-life. It also gives birth to class (and its inequality); racial and gender inequality, climate inequality and so forth.

Exploring the possibility of forging the red / green alliance in South Africa

According Cock (2018), and Pillay (2020) the global ecological crisis has reached a stage where mobilizations needs to spread beyond the factory line to communities, through forged alliance between red and green. Pillay (2020) introduces a new breed of unionists, which emerges from an eco-socialist working class politics. Pillay (2020) contends that fossil fuel capitalism takes the labour movement to into the realm of democratic eco-socialist working class politics the building of red/green coalitions.

Pillay (2020) contends that

A democratic eco-socialist working class politics recognizes the social and natural limits to fossil-fuel GDP growth pathways, and the need to forge a new form of counter-hegemonic politics, based on red-green alliances. This is a major challenge to trade unions, rooted as they are in defensive bargaining relationships with employers, and/or relations of patronage with political parties and the state.

Pepper (1992), Lowy (2018), Cock (2019) and Pillay (2020) emphasizes the need for red/green alliances. Pillay (2020) highlights that Borron (2012) and Olin-Wright (2010) contend that the red / green alliance combines radical utopian visions which averts pitfalls of dreamy utopianism and pursues politics that aimed a strategic engagements which averts pitfalls of “possibilism” (Pillay, 2020, p.4).

It should be noted that red/green alliance is difficult to achieve considering that trade union are trapped in bargaining relationships with employers and they are also patriotic to political parties and to the state, due to most trade unions in South Africa having ties political parties. However, Pillay (2020) notes that there are exceptional cases where political party unionism was combined with social movement unionism to achieve a greater good like in the case of Central Unica dos Trabalhadores (CUT) in Brazil, the Labour Party in the UK and the Solidarity Party in Poland which were formed by trade unions.

In South Africa the Congress of South African Trade Unions (COSATU) is in a tripartite alliance with the ruling party, the African National Congress (ANC) and the South African Communist Party (SACP) whilst South African Federation of Trade Union (SAFTU)'s biggest affiliate is the National Union of Metalworkers of South Africa (NUMSA) which as mentioned above, that it formed its own political party called the Socialist Revolutionary Workers' Party (SRWP), which surprisingly enough did not include the environmental or ecological concerns in its 2019 election manifesto or in its founding constitution. This shows the party's orientation or level of commitment concerning ecological enhancement / justice.

It is clear that South African trade unions in general have combined economist unionism with political party unionism, consequently they have ignored and suppressed any possible trait of social movement unionism. When they are seen to be engaged in environmental issues or debates is mainly for political scoring or defending their ideological positions and to remain relevant.

According to Pillay's analysis the major challenge to trade unions is that they are rooted in defensive bargaining relationships with employers, and/or relations of patronage with political parties and the state. I argue that this is also the case with most South African trade unions hence the difficulty in forging red/green alliances because of their allegiance either with a political party or the state. I strongly contend that in most instances trade unions mix political party unionism with economist unionism. This may be a case within COSATU affiliated union and also within SAFTU's affiliated NUMSA. However, Cock (2019) notes that in 2010 when COSATU was working on developing a policy framework for climate change, it forged an alliance with environmental organizations. Cock is in fact referring to the reference group that is the subject of this study (the composition of the reference group is discussed in the findings chapter below).

The red / green alliance and its sustainability is hindered, considering political party unionism and economist unionism which dominates the agenda and the mandate of unions. The first step in forging red / green alliance might involve showing interest, organizing and attending joint awareness building and protest campaigns. On this note it must be noted that the SAFTU's general secretary and former COSATU's general Secretary, Zwelinzima Vavi was seen attending

a climate protest march organized by environmental and grassroots organizations in September 2019, where these organizations delivered a memorandum at the Gauteng Legislature (a process I attended in my capacity as a Researcher).

According to SAFTU's article published in its official website on 01 June 2020 SAFTU has recently endorsed the urgent need for climate justice, land nationalization and no to mining. SAFTU contend that "environmental injustice is in many ways an extension of and continuation of colonial injustice" (SAFTU website, 1 June 2020). In this article SAFTU correctly questions the proposed controversial Traditional Khoisan Leadership Bill that will allow an undemocratic process, where tribal chiefs / authorities can enter into land agreements with mining companies, with little or no consultation or consent from broader communities.

What is not clear is whether Vavi and SAFTU are genuinely concerned about the ecological crisis and the rights of the rural communities where mining rights are sought or whether SAFTU or Vavi's interest is due to political unionism and whether SAFTU and Vavi are merely seeking to score political mileage or they are simply pursuing an ideological agenda and want to stay on familiar territory. Only time will judge because climate justice activism is not an occupation that one can change at any given moment but it is a lifestyle that is intertwined with nature. It's activism is innate.

It need to be emphasized that climate justice activism's sole objective is to restore the social metabolism between nature and humans, thereby creating societies that live in harmony with nature. I therefore contend that if trade unions were to prioritize environmental concerns and be able to identify and to resist the systematic elements of capitalism, it is possible to forge red/green alliances. This will enable trade unions to move away from political unionism and economist unionism to social unionism. Political unionism and economist unionism traps unions in productivist fossil fuel politics. Similarly, the environmentalist must always remain vigilant in order to avoid the pitfalls of Marxism Leninism. Pillay (2020) notes that that productivist fossil fuel politics are somehow an obstacle to social movement unionism which was pursued by Rick Turner in the 1970s. According to Pillay (2020) Rick Turner had promoted 'workers' control' of both unions and industry, as a stepping stone towards maximum participatory democracy in

society as a whole. This according to Pillay was "a *society-focused* socialist vision" (Pillay, 2020, p.6).

Conclusion

The literature therefore shows that there are tangible and physical limits to nature and prices of goods and services are not a good indicator of available resources. According to literature even the discovery of new natural resources won't solve the ecological crisis and it also cannot solve the inherent defect in the global economy (Martinez-Alier and Schlupmann, 1987, p.109).

Fossil capitalism exhausts non-renewable resources such as fossil fuels when making products or burning them as fuel. Workers are caught in between, as they need to sell their labour, under extremely exploitative conditions, in order to make a living. Trade unions have an obligation, therefore, to ensure that companies embark on a just transition to a low carbon and climate resilient economy, in order to protect jobs, workers and the environment. Such a transition may involve reskilling and finding suitable eco-friendly jobs but most importantly it also requires a regime change.

The literature also shows there are variations on what 'just transition' means. To clear the confusion Cock (2019) talks of transformative 'just transition'. A transition that is just and democratic; a transition that seeks a total transformation of the political economy away from capitalism, a bottom up process that will lead to a democratic participation led by trade unions. I contend that in order to implement the transformative just transition through eco-socialism, an active an active an active an active consciousness to identify and to resist the systematic elements of capitalism is required.

In conclusion it is important to highlight once again that in this study I have combined ecological Marxism and eco-Socialism as my theoretical framework. I will be using both approaches as well as an active consciousness to identify and to resist the systematic elements of fossil capitalism as my theoretical framework to analyze fossil capitalism; the notion of the just

transition and also to assess the methods through which COSATU climate change policy was developed.

Lowy (2018) is of the view that the capitalists go to great lengths to drive profit accumulation, having complete disregard of cost to life, and cost to the environment. According to Foster (2015), Foster and Clark (2016), and Parenti (2013) climate change, global warming and all catastrophic events are a ‘retaliation of nature’ / ‘revolution by nature’ to fossil capitalism. Fossil capitalism has further increased the metabolic rift between humans and nature.

According to Lowy, contrary to a very bleak future under the capitalists’ watch, eco-socialism can provide a ‘just and a sustainable future’. Lowy contends that

The capitalist system, driven at its core by the maximization of profit, regardless of social and ecological costs, is incompatible with a just and sustainable future. Ecosocialism offers a radical alternative that puts social and ecological well-being first. Attuned to the links between the exploitation of labor and the exploitation of the environment, ecosocialism stands against both reformist “market ecology” and “productivist socialism.” By embracing a new model of robustly democratic planning, society can take control of the means of production and its own destiny (Lowy, 2018, article on Why Ecosocialism: For a Red-Green Future).

Lowy (2018) further contends that “environmentalists and socialists will need to recognize their common struggle and how that connects with the broader “movement of movements” seeking a Great Transition”.

Barry (2010) notes

The reason there is no capitalist solution to climate change is simple. Capitalism is made up of thousands of corporations, all competing for investment and profits. There is no “social interest” in capitalism only separate interests. If a company decides to invest in cutting emissions, its profits will go down. Investors will move capital into more profitable investments. The ‘green’ company goes out of business. “Grow or die” is the

motto of the private enterprise economy. Capitalist anarchy, its social irrationality, is not accidental. It is not the product of a 'market failure'. It is the very nature of the beast".

Parenti (2013) also agrees with this view as he contends that "capitalism has a growth imperative while the earth is finite" (Parenti, 2013, article). According to Parenti's analysis capitalism and nature are at odds with each other because the capitalist's appetite to grow, depletes the earth's natural resources which are static, after their natural formation process took millions of years.

Parenti also contends that climate change is nothing other than 'an ecological breakdown' which is attributed to fossil driven economy (fossil capitalism) and subsequently perceives climate change as a rebellion of nature. Like many activist Parenti advocates for a regime change to end fossil capitalism and notes that "climate change is a problem of an entirely different order of magnitude" and in order to defeat fossil capitalism, society need to build a well-organized, broadly supported, yet tactically and strategically radical movement to demand proper climate policy. For such a movement to be effective it must use myriad tactics, from lawsuits and lobbying to direct action such as tree-sits, road blockades, and occupations aimed at the infrastructure of the fossil fuel industry. Only by disrupting the working of the political and economic system as a whole can we forge a consensus that ending the fossil fuel sector is essential. (The work of Francis Fox Piven and Richard Cloward is, in my opinion, still among the best in tracing the dynamic of this process of rebellion and reform.

In essence, the above arguments have shown that socialism and capitalism cannot co-exist. For eco-socialism to exist, capitalism must reach its end. Eco-socialism cannot thrive within the capitalist economy. Naturally, eco-socialist are anti-capitalist. Similarly capitalist are anti-socialist. Therefore being an anti-capitalist requires an active consciousness to identify and to resist the systematic elements of capitalism. Once this is realized it will be possible to pursue eco-socialism.

RESEARCH METHODOLOGY

Introduction

This section outlines the methods used in selecting the research topic; the main research question; and how it connects to the study. It also explains why I chose to use the qualitative method only instead of quantitative method or combining the two methods. The section also explains the impact of this choice on the outcome of the research.

According to Kallet (2004) a good methodology section describes actions taken to investigate a research problem and the rationale behind the selection, application of specific procedures and techniques used to identify, select, process and analyse information applied to the understanding of the research problem; also explains how the results were obtained and analysed for various reasons, including that the method chosen affects the results and the way the researcher interpreted their significance in the discussion section of the report. Kallet (2004) contends that readers need to know how data was obtained in order to evaluate the validity and reliability of the study.

According to Bem (2008) the method that a researcher chooses is likely to affect the result. He contended that the has to be reliable because an unreliable method produces unreliable results and it gives incorrect interpretations of the findings.

In the main this methodology section explains two crucial areas, namely, how data was collected and how it was analysed. The research is about the role of trade unions in advancing a ‘just transition’ in South Africa through a case of COSATU’s perspective and approach to climate change. The study seeks to find out how COSATU’s policy on climate change and its 2009 resolution of pursuing a just transition towards a low carbon and climate-resilient society was developed. Consequently, the primary focus of the research was on the policy formulation process, particularly the events which preceded the endorsement of the COSATU Climate Change Policy Framework in 2011 and the adoption of the climate change policy at the 2012 National Congress. Most importantly the study examines the methods through which the climate

change policy was developed. This forms the core of the study and is formulated as the main research question.

The examination of the methods / process through which the COSATU climate change policy was developed entailed a thorough analysis of what were policy considerations; how were COSATU affiliates involved in the process and what were their respective positions; to what extent workers were involved; who were the different stakeholders involved in the deliberations; and drafting of the policy and how the policy was presented to workers across the federation. What was the federation's or respective affiliate's ideological grounding, what was the federation's or respective affiliate's ecological orientation? What forms of trade unionism was prevalent at the time and how has this influenced the policy outlook including its implementation, to what extent was the trade union movement involved with environmental issues and environmental organizations, its involvement or collaboration with community issues, social movements, grassroots organizations; which schools of thought, if any, dominated the policy formulation process? Consequently, the study was guided by the research method which is explained below.

Research design method

The scientific method used in this study was qualitative method, chiefly because the study involved an enquiry which sought to provide an understanding of the COSATU Climate Change Policy formulation process. The study did not involve gathering of any numeric data and there was no questionnaire used to gather any data. The choice of the method selected which is used as the tool for analyzing the data.

Consequently primary sources, namely, newspaper articles and various websites articles were gathered and perused in order for the researcher to learn as much as possible about the dynamics around COSATU and its alliance partners as well as COSATU's climate change policy position prior to undertaking to conduct extensive data collection. This preliminary research enabled the researcher to identify the main actors. They were identified as:

- The COSATU Policy Unit
- The COSATU Research arm, NALEDI

- COSATU Climate and Energy Crisis Committee
- Climate Change Reference group established by NALEDI
- COSATU and /or affiliated workers, shop stewards and union officials
- Environmental organizations that were involved such as WWF, Earthlife, Groundworks, AIDC etc.
- The involvement of a representative and member of SWOP, Prof. Jacklyn Cock

Most of the research interviews happened either at COSATU Head office, around Johannesburg, via SKPE, WhatsApp Zoom and Microsoft Teams. All those who participated in the study were given information letters as well as consent forms which had to be signed before hand. The information letter contained background information (an overview of what the study was about) of the study as well as the researcher's and the supervisor's contact information, whilst the signed consent forms authorized the researcher to conduct the required interview within the boundaries set in the consent form.

Main Research Question

1. What was the process through which COSATU's policy approach to climate change and 'just transition' was developed?

Sub Research Questions

1. How and by whom was the process initiated?
2. Through what methods did the process proceed?
3. How and to what degree were the affiliates involved?
4. How and to what extent did the process include ordinary workers?

These research questions informed the specific questions address to respondents (see Diagram 1)

Diagram 1

The research guide / schedule
Researcher: Bonginkosi Paul Zulu Supervisor: Devan Pillay
Topic “The role of trade unions in advancing a ‘just transition’ in South Africa: A case of COSATU’s perspective and approach to climate change and ‘just transition’”.
Main Research Question What was the process through which COSATU’s policy approach to climate change and “just transition” was developed?
Sub Research Questions 1. How and by whom was the process initiated? Who were the <i>individuals or organizations involved</i> in proposing that COSATU must adopt a policy on Climate Change and what were the <i>reactions from different stakeholders</i> ? What <i>motivated</i> those who advocated for the policy and what were the <i>concerns</i> of those who were against the adoption of such a policy? Which technocrats (academics and NGO) were utilized in the research, debate/discussions and drafting of the policy? Who called the meetings, where were the meetings <i>held</i> and who <i>attended</i> the meetings and over what <i>period</i> were there meetings and discussions on the subject of Climate Change? What were there <i>engagements</i> in those meetings? 2. Through what methods did the process proceed? Were the focus groups established and if so <i>how</i> were they established and <i>who participated</i> ? What were the <i>terms of reference</i> for the focus groups? How often did they meet and where there <i>discussions recorded</i> or minuted and was there a <i>report</i> from the focus groups? What were there engagements at <i>Congress</i> , in the <i>commissions</i> and during <i>side caucuses</i> ? What were the <i>main positions</i> held by different stakeholders including buy-ins, <i>disagreements and concessions</i> by the delegates or focus group participants or respective trade unions? 3. How and to what degree were the affiliates involved? How were the trade unions <i>engaged</i> at the inception of the process, during the discussions/participation in focus groups, at commissions and at congress? Did all affiliate <i>participate in the discussions</i> and which of the affiliates were <i>most vocal</i> ? How <i>deep were the engagements</i> and to what extent was there input from the technocrats welcomed or challenged? What were there affiliates respective positions i.e. <i>Numsa, SATAWU, NEHAWU, FAWU and NUM</i> , during the policy formulation process or in the discussions at Congress? 4. What were the respective <i>affiliate’s contributions</i> to the actual policy? How and to what extent did the process include ordinary workers? How were the ordinary workers <i>engaged</i> ? How did the ordinary workers <i>react to the policy initiative, formulation and adoption</i> ? What were the <i>contributions</i> from ordinary workers? Where such contributions <i>considered</i> when the policy was drafted and tabled at Congress? Did the ordinary workers <i>understand</i> the effects of climate change and the dire effects of non-action? Was the policy <i>endorsed by ordinary workers</i> ? Follow up questions arising from interviews conducted with other interviewees Was there any climate change or just transition research conducted by your organization prior to the formation of the reference group? Are there any research documents i.e. interview notes, registers, transcripts that you can share? Were there any major disagreements on the policy content? Do you have possible contacts that may also contribute to the research?

Data Collection Techniques

The primary source of data collection was in-depth interviews and document analysis. In-depth interviewing is a qualitative research technique that involves conducting intensive individual interviews with a small number of interview participants to explore their perspectives on a particular idea, program or situation.

In-depth Interviews

All questions were open-ended questions designed to provide flexibility which allowed the interview to flow. The participants were not confined to restrictive questions and therefore were able to express themselves freely.

The interview guide / schedule used to interview all participants, namely, key informants and worker leaders and union officials. The interview guide / schedules were also designed in such a way that accommodates discussion around the policy content, the methods employed to develop and implement the policy, the role played by environmental organization and workers.

Purposive and random sampling was used to identify individuals who were involved in the policy formulation process. Interviews provide in-depth, coherent and dense information (Weiss, 1995). This approach was ideal to the study considering that different people from different political and ideological backgrounds were involved at the different stages of developing and implementation the COSATU Climate Change framework, which culminated into a Climate Change Policy and the COSATU's stance to pursue a low carbon and a climate resilient society.

Sampling is central to the practice of qualitative methods. The researcher relied on on-probability and purposive sampling to select the sample, as participants were selected based on their ability to provide information relevant to the study rather than representativeness (Maxwell, 1998; Neuman, 2000) or quantity. According to Robinson (2013) there is a four-point approach to sampling in qualitative interview-based research and contends that

The approach is mainly about (1) defining a *sample universe*, by way of specifying inclusion and exclusion criteria for potential participation; (2) deciding upon a *sample size*, through the conjoint consideration of epistemological and practical concerns; (3) selecting a *sampling strategy*, such as random sampling, convenience sampling, stratified sampling, cell sampling, quota sampling or a single-case selection strategy; and (4) *sample sourcing*, which includes matters of advertising, incentivizing, avoidance of bias, and ethical concerns pertaining to informed consent. The extent to which these four concerns are met and made explicit in a qualitative study has implications for its coherence, transparency, impact and trustworthiness.

The individuals identified were people who played a pivotal role either in the development or implementation of the climate change policy framework which was endorsed by COSATU in 2011. These individuals were Jane Barret; Khwezi Mabasa; Professor Jacklyn Cock; Fundi Nzimande; Louise Naude; Howard Mbana; Rudy Dicks, Makoma Lekalakala; Liesl Orr, Mike Levington (Not part of the NALEDI Climate Change Reference Group), GSD Chauke, Khangela Baloyi, Alfred Mafuleka, Babsy Nhlapo, Hameed Deedat, Lebo Mulaisi and Melisize Tyaisi. These individuals were interviewed accordingly except for Tanya Van Meelis who was also identified but could not be reached.

Due to Rudi Dick and Baloyi's interviews which happened very late and the data obtained from that interviews prompted me to revise some of the data analysis particularly around the subject of coal mining and the position of NUM and Numsa during the course of the endorsement of the policy as well as in the period post the endorsement of the policy. I then interviewed Khangela Baloyi from NUM. Dinga Sikwebu from Numsa was not available for the interview, despite many attempts to arrange a suitable date with him. All participants interviewed were candid with me during the interviews. They were free to express their views on the COSATU's approach to climate change and the just transition.

According to Boyse and Neale (2006) in-depth interviews are useful in gathering detailed information about a person's thoughts and behaviors or want to explore new issues in depth. Boyse and Neale (2006) also notes that "the interviews are often used to provide context to other

data (such as outcome data), offering a more complete picture of what happened in the program and why" (Boyse and Neale. 2006, p. 3).

As mentioned above the interview technique employed was mostly purposive sampling but where necessary I employed random as well as snowball sampling. Snowball sampling was used at the beginning of the research, after the preliminary study which helped to identify persons to be interviewed. Small samples of workers were randomly selected. Snowball sampling also enabled me to reach people that I was not aware of, who played a pivotal role either in the drafting or in the discussions or in the endorsement or in the implementation stages of the policy. Such persons were Khwezi Mabasa, Fundi Nzimande, Babsy Nhlapo, Alfred Mafuleka, Chauke, Mziwakhe Hlapo (whom was never interviewed as he needed permission from NUM to participate in the interview process), and Mike Levington.

Access to the interview site

Due to the fact that most of the people who were interviewed were around Gauteng and were mostly subject experts / activist, COSATU / Affiliate and NALEDI officials. I was able to access the interview sites easily because when I enrolled as a student with the Global Labour University I worked for LIMUSA a trade union affiliated to COSATU and now absorbed by NUM and my office was situated at the COSATU HOUSE, on the 7th floor which is on the floor where NALEDI (the COSATU's research institute) is situated. Prior to this LIMUSA's offices were situated in the 5th floor. The floor is where COSATU's Policy Department as well as the Chris Hani Institute is situated. I was therefore able to access the research sites with ease. I was also able to obtain the required documentary data except during the National Lockdown in response to the COVID 19 pandemic, in which case I used Skype, WhatsApp and Zoom to interview a number of key informants.

Due to the lockdown regulations and the risk associated with the COVID 19 pandemic it became increasing difficult to get some physical documents, thus I gathered electronic documents and where possible I used an App on my mobile phone to scan some of the documents.

In conclusion, the qualitative method gave me an in-depth interaction with the informants whilst the interview guides offered flexibility to probe further or to include someone whom I was directed to during the interviews. This enabled me to get vital information that is rich and based on lived experiences.

Coding technique

When I was analyzing the data collected from the interviews I used Thematic Analysis approach and Qualitative Coding technique. My coding concentrated on words, phrases and concepts that were either repeated by all the participants during the respective interviews or what the participants emphasized as important as well as those words, phrases and concepts that came as a surprise to me during the interview. I color coded these words, phrases and concepts according to the categories and context in which they were used by the respective participants. I linked these categories to the research question i.e. What was the process through which COSATU's policy approach to climate change and 'just transition' was developed? I also linked the themes to the four subsidiary questions aimed at answering the main research question. I assigned different color codes to different categories, grouped them together and assigned themes. In total I worked with 33 codes and came out with 14 themes. I subsequently used the same method combined with the methods outlined below to analyze participatory observation notes, web pages, documents i.e. congress resolutions, minutes of NALEDI reference groups, COSATU climate and energy sub-committee minutes, research, project reports and interview transcripts.

The reference section of the report provides a list of 17 interview participants as well as the list of documents i.e. minutes, reports, workshop and seminar presentations, draft and final resolutions, resource documents, discussion papers, attendance registers and NUM's position as articulated by Khangela Baloyi. It is important to highlight that I found Thematic Analysis approach very useful when coding; analyzing data as well as writing a findings chapter.

Data analysis is "the process of bringing order, structure, and meaning to the mass of collected data" (Marshall & Rossman 1995: 111). Analyzing qualitative data aims to understand the bigger picture through using data to describe and find the meaning of a certain phenomenon. When all

the interviews have been conducted, the interview recordings are played back and meticulously transcribed and checked after which the writing up of the data analysis commences.

Thematic analysis, which was employed in this study (8 steps of thematic analysis are outlined below), explores, and identifies patterns or themes within the text. It views different ranges of meaning within a theme and not statistical significance. By constantly comparing data and careful examination of data, categories and themes emerge. The researcher identified common themes, topics, ideas, and patterns of meaning that come up repeatedly from the participants (Bezuidenhout, 2014; Leedy & Ormond, 2005).

Finding themes in the narratives helps to sum up the debates and statements made by participants and can be useful in explaining concisely what is going on. Themes and categories for coding are set out in the literature reviewed for the study. This can make it relatively easy for the researcher to relate the findings of the study to the already existing literature (Rubin and Rubin 2005: 207-208). The data was qualitatively coded.

Qualitative coding involves systematically labeling concepts, themes, events, or topical markers so that they can readily be retrieved and examined (Rubin & Rubin 2005: 207-208). Coding furthermore concerns “attaching one or more key words to a text segment in order to permit later identification of a statement” (Kvale 2007: 105).

After printing out all the transcripts, I worked through all of them looking for the most re-occurring words, themes, ideas, opinions, and phrases and highlighted them in different colors. To make this easier, Rubin and Rubin (2005: 204-205) suggest that one creates and keep memos that contain notable quotes throughout the research process. These quotes might provide important pointers or answers to the research question(s). Each set of words, themes, ideas, opinions, and phrases are grouped and marked by different shades. The researcher then combined the concepts identified earlier to suggest how the overall phenomenon, under study, operates. At this stage I looked for possible patterns that emerged from the data and followed these patterns to link them.

Eight steps process in thematic analysis

Zhang and Wildemuth (2009: 309-311) describe the following steps followed in qualitative data analysis:

- Prepare the data- The researcher transcribed the raw data that was collected into written text before starting with the analysis
- Defining the coding unit to be analyzed- In this step, the data (text) was closely examined and broken down into parts- phrases and paragraphs. The researcher compared and grouped these parts in terms of relations, similarities, and dissimilarities. Different parts of the data were marked with appropriate codes to identify them for further analysis. The researcher was led by the research question in identifying the coding units.
- Developing categories and coding scheme or conceptual framework- This step involved grouping related coding units together to form categories of codes.
- Testing the coding scheme on a sample text- This step involved testing the clarity and consistency of the category definitions on a sample of the data.
- Coding all text- Coding the data refers to the scrutiny of the researcher's data and taking note of all the relevant and meaningful sections and items. Thematic coding was used in this research.
- Assessing coding consistency- Once all coding was completed, the researcher rechecked the consistency with which the coding was conducted.
- Concluding the coded data- This step involves the interpretation of the themes or categories identified. At this stage, the researcher makes inferences and present the reconstruction of meanings derived from the data. The analysis was augmented by drawing on existing theories and relevant literature.
- Reporting methods and findings report the process that was applied in the analysis as completely and as accurately as possible

Documentary analysis

According to Bowen (2009) document analysis is a form of qualitative research in which documents are interpreted by the researcher to give voice and meaning around an assessment

topic. He explains that this process incorporates coding content into themes similar to how focus group or interview transcripts are analysed. A rubric can also be used to grade or score document. According to Bowen in (2009) the documentary analysis is not about the quantity of documents gathered and analysed by what is key is the quality of the data.

According to Bowen (2009)

There are many reasons why researchers choose to use document analysis. Firstly, document analysis is an efficient and effective way of gathering data because documents are manageable and practical resources. Documents are commonplace and come in a variety of forms, making documents a very accessible and reliable source of data. Obtaining and analyzing documents is often far more cost efficient and time efficient than conducting your own research or experiments (Bowen, 2009). Also, documents are stable, “non-reactive” data sources, meaning that they can be read and reviewed multiple times and remain unchanged by the researcher’s influence or research process (Bowen, 2009, p. 31)

According to O’Leary (2014) there are three primary types of documents, namely, public records, personal documents and physical evidence. O’Leary (2014) contended

Public Records: The official, on-going records of an organization’s activities. Examples include student transcripts, mission statements, annual reports, policy manuals, student handbooks, strategic plans, and syllabi.

Personal Documents: First-person accounts of an individual’s actions, experiences, and beliefs. Examples include calendars, e-mails, scrapbooks, blogs, Facebook posts, duty logs, incident reports, reflections/journals, and newspapers.

Physical Evidence: Physical objects found within the study setting (often called artifacts). Examples include flyers, posters, agendas, handbooks, and training materials.

O’Leary (2014) contends it is advisable that before actual document analysis takes place, the researcher sets up a detailed planning process in order to ensure reliable results. He subsequently outlines an 8-step planning process that should take place not just in document analysis, but all textual analysis, namely:

Create a list of texts to explore (e.g. population, samples, interview participants, participants). Consider how texts will be accessed with attention to linguistic or cultural barriers. Acknowledge and address biases. Develop appropriate skills for research.

Consider strategies for ensuring credibility. Know the data one is searching for. Consider ethical issues (e.g., confidential documents). Have a backup plan.

According to Bowen (2009, p. unknown) "the researcher must consider the subjectivity of the author and also the personal biases he or she may be bringing to the research". Bowen also points out that the researcher must evaluate who was the initial target audience and what was the objective of the document. The research must also determine whether the document was solicited, edited, and/or anonymous.

I used the guidelines set in Bowen (2009) and O’Leary (2014) when I was analyzing documentary evidence. Thus, my primary documentary analysis involved newspaper articles, Facebook, artifacts such as handbooks and posters, COSATU Congress minutes and resolutions for the 9th to the 13th National Congresses; The 2011 Climate Policy Framework; The 2012 Climate Change policy document / booklet, Secretariat Report from the 5th to the 9th Central Committee meetings; various political reports; various Reports to the Alliance; Socio-economic report to congress; various publications and articles on climate Change crisis, the just transition, energy crisis, minutes of backroom caucus meetings, minutes of the reference group as well as minutes of the Climate and Energy Crisis Committee meetings and documents, Central Committee minutes and keys decisions and the Climate and Energy Crisis Reference Group documents; NALEDI’s Climate Change research documents; literature review; attendance registers; seminar and workshop presentations.

Other sources

I have also used media sources such as newspaper articles, television documentaries, music videos and radio and television debates. O’Leary (2014) must consider when beginning document analysis. The first is the issue of bias from the author or creator of the document and / or the researcher's as well.

Ethical Issues

Prior to the commencement of the research, the researcher was required to submit an ethics application with the Wits Ethics Committee. The ethics application was approved. There was no potential or possible harm to participant that could be identified thus no harm was anticipated. However, most of the interviews were conducted during the lockdown period in response to Covid 19 pandemic. No one could have foreseen or predicted the pandemic, thus this was not mentioned in the researchers' ethics application.

As a precautionary measure, to avert exposing the participants to any potential risks or harm to participants, Skype interviews were conducted with about thirteen participants. Each interview lasted about 45 minutes to an hour. Consequently, no participant was exposed to any harm during the interviews.

An important consideration for this research was to ensure that the rights and the welfare of participants are protected. Therefore the following ethical guidelines were adhered to in this study:

1. The researcher informed the participants / informants that participation was voluntary and was without consequences. The participants / informants had an election not to participate or to withdraw from the study at any time. Upon agreeing to be interviewed, all participants were required to sign consent letters, before the scheduled interviews.
2. No harm was brought upon participants / informants. I adhered to the participants / informants sensitivity to issues and experiences. They spoke openly and some of the information was said in confidence. I assured those particular participants that their confidentiality will be respected. Indeed, throughout this report the participant's confidentiality was guaranteed.
3. All Key informants and participants were asked whether or not they wish to be identified in the research report. None of the participants / informants wanted to be anonymous.
4. The purpose of the study was made clear to the participants / informants, upfront, via an information letter, which was signed off by my supervisor.

5. Care was taken to explicitly ask permission for the interviews to be mechanically recorded. All of the participants agreed that the interviews be recorded.
6. Opportunity was also provided for participants to obtain appropriate information about the nature and the results and conclusions of the study will be made available to them.

Limitations of the Study

1. The Covid 19 pandemic was a major setback as the deadline for report submission was drawing near. Setting up interviews and aligning the interview to the participants' spare time was very challenging. A few times one or two participants rescheduled at the interview scheduled time.
2. Most of the key informants had either left COSATU or NALEDI. Locating them was also challenging.
3. Acquiring some documents were a major challenge due to eight to eleven years had passed since the resolution was passed at the COSATU's 10th National Congress in 2009. Furthermore NALEDI's server crashed few years ago and some of the documents were lost. However I was able to retrieve documents which were crucial to the study. Some of the documents were not passed over from person to person due to natural attrition and as a result there was no record of documents which were handed over. The Federation and NALEDI do not have a standard system of hand over when people leave the organizations and new people take over. At time months pass before a position is filled thereby making a proper hand over process practically impossible. Most of the documents I received were from some of the participant's personal files, COSATU website, COSATU Policy departments and from NALEDI's server.
4. Since some of the documents (such as minutes of meetings held; attendance registers, research and presentations) were to be retrieved from the NALEDI and COSATU archives and due to the National Lockdown the COSATU House was closed, retrieving those documents was delayed, so was the analysis of such documents. The researcher proceeded to analyze the documents at his disposal and asked Liesl Orr and Melisizwe Tyaisi (NALEDI) to retrieve the documents and to send the documents electronically. Physical / hard copy documents were therefore scanned and sent electronically by

Melisizwe Tyaisi in the month of August 2020. I had to obtain such permission from Hamed Deedat the current Director at NALEDI. A similar request had been made to Lebogang Molaisi the current COSATU Policy Coordinator who was able to send all the documents at her disposal and in the COSATU Policy Department archives around mid-July 2020. The rest of the documents I obtained from Jane Barret, Liesl Orr and Louise Naude during their respective interviews because they kept some documents in their personal file / computer. I verified the authenticity of the documents with the other participants.

5. Generally larger sample sizes are commonly required in order to apply findings to the larger populace, in this study the sample selected were participants were all directly involved in the development and the implementation phases of the study. There were able to provide in depth information as opposed to relying representativeness or quantity as a sample which could not provide the information. Furthermore the sample chosen were the people who had firsthand information on the development, the dynamics and the implementation of the COSATU Climate Change Policy after the adoption of the policy framework. The size of the sample was therefore complemented by an extensive documentary analysis.

This was to dispel the view that qualitative data is "soft" and unable to generalize in the same way that quantitative design makes possible (Greenstein et al, 2003). This view is also supported by Kerlinger (1986), McCall (1990) and Rosenthal and Rosnow (1991) who all contend that smaller sample size makes it impossible to yield statistical results that are less widely generalizable to wider population. However, in this study the qualitative method and the sample chosen gave me an in-depth interaction with the participant and also allowed the participants to fully express themselves thorough without being restricted by a standard questionnaire. The interview guides offered flexibility to probe further or to include someone whom I was directed to during the interviews as well as asked questions that emanates from the primary as well as documentary data. This approach allowed me to cover as much ground as possible.

Furthermore Patton (2002) contends that qualitative studies deal with naturalistic approaches to understand the phenomena, within specific context settings such as a real world settings where

researchers do not manipulate the phenomena studied. Whilst Gillham (2011) noted that qualitative research allows the researcher to study a phenomena and gain insight in a field where little is known.

RESEARCH ANALYSIS AND FINDINGS CHAPTER

INTRODUCTION

This chapter starts by explaining the research site which is COSATU and also gives a brief description of NALEDI, the research wing of COSATU. Then the chapter briefly explains the formation of the NALEDI Climate Change Reference Group (Reference Group) which was the research sample chosen in the study. The chapter also highlights the terms of reference for the Reference Group as outlined in the project proposal. Lastly the study discussed 14 common themes that came up in the data analysis. The chapter used Thematic Analysis approach for data analysis and relies on a theoretical framework to make sense of the data. Upon analyzing the data the chapter gives its key findings and a conclusion.

The research site - COSATU



The Congress of South African Trade union (COSATU) is the largest federation in South Africa (Wikipedia, the free encyclopedia, Congress of South African Trade Unions). The other trade Union federations in South Africa are FEDUSA with 560 000 members, NACTU with about 400 000 and SAFTU which was formed on 21 April 2017 after NUMSA was expelled from COSATU with its 370 000 members. SAFTU has 800 000 members (Wikipedia, the free encyclopedia, Trade Unions in South Africa). The SAFTU's official website records that SAFTU is a revolutionary socialist orientated.

According to COSATU's official website it was launched in December 1985 after four years of unity talks between unions opposed to apartheid and committed to a non-racial, non-sexist and democratic South Africa (COSATU official website, www.cosatu.com). COSATU claims that at its launch it represented just less than half a million workers who were organised by 33 affiliated trade unions and currently it represents about two million workers, of whom at least 1.8 million are paid up members.

According to COSATU it is the fastest growing trade union movements in the world and contends that when most trade unions are facing a decline in membership, it is continuing to grow. This undoubtedly makes COSATU a formidable voice in South Africa and abroad. However, it's claim of being the fastest growing trade union federation is being questioned in the media and by claims made by skeptics, for example, on 03 August 2019 Natasha Marrian a reporter and Deputy Editor for businesslive / financial mail wrote:

Trade unions were once a powerful force. Now they are on the wane for a variety of reasons. These include the changing world of work, fragmentation and labour market forces beyond their control, business unionism, greater competition – and corruption. Yet the largest federation, COSATU, still has political sway through its alliance with the ANC. But the rate of the decline raises the question: how long will its clout last? (Financial Mail, the end of unions, 3 October 2019).

As pointed out above on 07 November 2014 COSATU expelled the National Union of Metalworkers of South Africa (NUMSA) which was one of its biggest affiliate (News24, NUMSA expelled from COSATU, 8 November 2014). Following the expulsion of NUMSA seven other unions, left COSATU.

Despite the split COSATU remains the biggest federation in South Africa and the decisions are taken in a democratic fashion. According to its website, one of COSATU's key objectives is to improve material conditions of its members and of the working people as a whole and it believes in a democratic society free of racism, sexism and the exploitation of the working class (COSATU website). COSATU boldly contends

We believe in a society where workers have full control over their lives. We are determined to work with other democratic forces to do away with all forms of oppression and exploitation (COSATU website).

According to the South African History online (SAHO) in terms of COSATU's Constitution workers

would dominate all the federation's structures; that a national congress would be held every two years and would be the highest decision-making body; that a central executive committee would meet every three months; and that an executive committee would meet every month (SAHO).

With the unbanning of the African National Congress (ANC), the South African Communist Party (SACP), COSATU and the ANC formed a Revolutionary Alliance called the Tripartite Alliance, The Alliance. On 31 July 2013 the polity website described the tripartite Alliance as

The Alliance is centered around short, medium to long terms goals of the National Democratic Revolution the establishment of a democratic and non-racial South Africa, economic transformation and continued process of political and economic democratization (www.polity.org.za, 31 July, 2013)

COSATU in its 6th National Congress COSATU on 16 September 1997 resolved that the tripartite 'alliance remains the only vehicle capable of bringing about fundamental transformation in South Africa' albeit the differences in the tripartite alliance over approaches to macro-economic policies" (COSATU website). The Alliance is still strong to this day despite the ANC leading a capitalist government whilst the SACP and COSATU have to some extent embraced 'socialist' principles.

The COSATU website contends that the SACP and COSATU are committed to the struggle for socialism. The extent to which COSATU's commitment to the struggle for socialism goes, remains a debatable subject, simply because there are views which suggests that capitalism and socialism cannot co-exist while there are countries where both capitalism and socialism are being practiced, especially in the Nordic countries as well as in Kerala, India (under the communist

rule). It is my contention however that the two economic systems are naturally opposites. COSATU as part of the Tripartite Alliance cannot go toe to toe with a ruling party, the ANC, unless there are talks within the alliance of the ANC to become a socialist party, in order to pursue a Socialist society. At the moment the tripartite partners have not engaged the ANC on the subject, at least, there is no record or empirical evidence, on the subject, known to the general public or the general membership of the alliance. In 1994 the ANC abandoned social democracy and pursued a more neoliberal pathway (with welfare rights entrenched in the Bill of rights). COSATU on the other hand, has been fighting for the social democratic policies contained in the RDP and its Macro-Economic Research Group (**MERG**) of 1993. In Volume 1 of the Economic Policy in the series titled Building a New South Africa it was reported that

Through the MERG process, as well as a number of other related activities (such as the Industrial Strategy Project), the ANC and the democratic movement sought to achieve two distinct goals:

- To develop a new macroeconomic framework that would guide these organizations through the negotiations and in preparation for government; and
- To generate an environment conducive to training promising black economists to be able to participate in substantive economic policymaking.

In retrospect, it is clear that MERG's research did play an important role in molding economic thinking within the ranks of the ANC and the democratic movement. Interestingly, the RDP reflects many of the ideas, numerical targets, and projections of MERG. Furthermore, MERG was successful in training a number of people who have subsequently moved into government and currently occupy senior positions

Below, this chapter explores how COSATU (as a member of the Tripartite Alliance) deals with fossil Capitalism in light of its call to for a transition to a low carbon and climate resilient society.

The National Labour and Economic Development (NALEDI) and its 2009 mandate

NALEDI is COSATU's research wing and carries out economic and labor research on behalf of the federation and the labour movement. According to NALEDI's official website

NALEDI's mission is to conduct policy-relevant research aimed at building the capacity of the labour movement to effectively engage with the challenges of the new South African society. Besides research, NALEDI's work also includes managing multi-institutional projects at national and international levels (NALEDI website)

At the 2009 COSATU National Congress (the Congress) adopted a resolution that COSATU is committed to pursuing the just transition to a low carbon and climate resilient economy and tasked NALEDI to conduct research develop the framework and oversee the policy formulation development process. On 14 December 2010 NALEDI developed a project proposal under context it recorded that

COSATU in its 10th National Congress affirmed that, "climate change is one of the greatest threats to our planet and our people". COSATU recognizes climate change as a developmental and social issue. From a development perspective the resolutions support the transition to a low carbon economy through changing unsustainable production and consumption patterns in which government investment to create new green jobs in a number of sectors is vital (NALEDI project proposal)

According to the project proposal the capitalist system is the primary cause of climate change and therefore the system is perceived as an ecologically destructive system, thus reducing emissions in key polluting industries, encouraging more energy efficiency, skills development and re-training workers is critical. The 2009 resolution perceives that the poor and working class as most vulnerable to the impact of climate change. The project proposal further recorded that

The resolution therefore recognizes that the developed countries are largely responsible for climate change and supports the principle of common but differentiated responsibility as an appropriate international response to climate change. In addition the resolution also calls for the "transformation of production, ownership and control patterns in the

economy in the interest of the working class and the poor...” (NALEDI Project Proposal).

The project proposal further reported that key aspects of the resolutions and the secretariat report to the 10th National Congress on climate change include:

- The importance of informing the membership and the public on the impact of trade and climate change and encouraging change in behavior through awareness raising, education and campaigns;
- The need for COSATU to develop a strategic Framework on Climate Change as basis for engagement with all stakeholders;
- The importance of lobbying by the Federation so that any agreement includes actions of green jobs, financing of support from developed countries and support for the just transition aimed at protecting the most vulnerable from the effects of climate change;
- Ensuring that provision is made for consultation with trade unions and civil society;
- Considerations on state interventions to address climate change versus market mechanisms; and
- Concerns raised on the increase of the costs of fuel and electricity and the impact this will have on the poor and working class.
- In this context the concept proposal provides a framework for research and capacity building for COSATU to develop their response to trade and climate change. It is also important to note that the Seventeenth Conference of the Parties (COP 17) will be held in South Africa. This will require COSATU and its affiliates to prepare for their participation and develop clear policy positions for this meeting, that includes; building a uniformed voice for trade unions and civil society;
- supporting a policy platform of trade unions and civil society that works towards a more equitable response to climate change, meets the developmental needs of workers and peoples of Africa and supports a developmental agenda other developing countries and least developed countries and lastly,
- ensure effective and sufficient pressure is placed on the SA government towards supporting progressive demands towards the COP17 meeting in 2011.

The project proposal further reported that the policy framework focuses on the three main areas in terms of COSATU's response and engagement to climate change. Namely,

1. Research on the sectors that significantly contribute to climate change in terms of emission intensity and the implications this will have on jobs, including impact scenarios of the current trade outcomes on employment and poverty
2. Capacity building to strengthen the federation and its affiliates advocacy for socially just solutions to trade and climate change
3. Developing a coherent policy framework for the basis of engagement.

THE INTERVIEWS AND DOCUMENTARY ANALYSIS

COSATU was the research site and the interviews were conducted at NALEDI, COSATU and via electronic media. The first interviews were done around May 2019 with Lebogang Molaisi and Melisizwe Tyaisi and final interviews were conducted between January 2020 and July 2020.

As discussed in the methodology section, the interview sample was taken from persons who participated the COSATU Climate Change Reference group leading to the development and implementation of the COSATU Climate Change Policy. I also interviewed Mike Levington who sits in NEDLAC representing business and in the past he represented government, also at NEDLAC. This was done in order to get a view from people outside the labour movement. It is also important to note that Lebo Lebogang Molaisi also sit in Nedlac representing labour. Rudi Dicks a former director of NALEDI who now works at the office of the Presidency was also interviewed.

I analyzed the interview data and documentary data separately but for practical purposes and chronological order the analysis is presented simultaneously under this section. Fourteen common themes came in the study. These themes are discussed below.

The formation of Climate Change Reference Group

Following the mandate from CEC to NALEDI to conduct research on Climate Change and its impact on the workers a Climate Change Reference group was formed in 2010. According to Jane Barret, at the time she was leading the Climate Change work whilst working for SATAWU and she became involved in establishing the COSATU reference group. She was elected amongst the affiliates to chair the reference group.

According to Jane Barret at the start of the Reference Group every affiliate was represented but the level of participation varied. The reference group consisted of trade union representatives and officials from different affiliates; representatives from environmental organizations (NGOs) and a representative from SWOP. All the participants in the study, with the exception of one participant, participated in the reference group. In total 17 participants were interviewed.

The following discussion discusses the common themes that came up during data analysis. A thematic data analysis approach was used to analyze both the documentary data and the data obtained from 17 interviews.

DISCUSSING THE THEMES THAT CAME UP DURING DATA ANALYSIS

Theme 1: the Just Transition: a progressive yet contested notion

Under the above theme it was apparent that all the participants in this study unequivocally identified fossil capitalism as the root cause of climate change and the pursuit of a just transition comes as a natural response to climate change and global warming. On 20 March 2015 the Mail and Guardian reported that COSATU Breaks the stereo types about climate justice on the article Khwezi Mabasa, one of the participants in this study and a former Social Development and Policy Coordinator for COSATU is quoted saying “Capitalism is killing us, It is killing workers and destroying the environment”. This assertion by Mabasa emanates directly from the COSATU climate change policy document.

In the article Mabasa contended that COSATU aims to break stereo types as climate change does not only affect the middle class, as it affects unemployment; economic structures and industrialization. Therefore, according to Mabasa COSATU has linked climate Change to socioeconomic challenges (Mail&Guardian, 20 March 2015).

In the pursuit of the just transition to a low carbon and a climate resilient economy COSATU identifies 15 key principles in its climate change policy document. The 15 principles are

1. Capitalist accumulation has been the underlying cause of excessive greenhouse gas emissions, and therefore global warming and climate change.
2. A new low carbon development path is needed which addresses the need for decent jobs and the elimination of unemployment.
3. Food insecurity must be urgently addressed.
4. All South Africans have the right to clean, safe and affordable energy.
5. All South Africans have the right to clean water.
6. We need a massive ramping up of public transport in South Africa.
7. The impacts of climate change on health must be understood and dealt with in the context of the demand for universal access to health.
8. A just transition to a low-carbon and climate resilient economy is required.
9. We need a carbon budget for South Africa.
10. African solidarity is imperative.
11. An ambitious legally binding international agreement designed to limit temperature increases to a maximum of 1.5 °C is essential as an outcome of the UNFCCC process.
12. We reject market mechanisms to reduce carbon emissions.
13. Developed countries must pay for their climate debt and the Green Climate Fund must be accountable.
14. We need investment in technology, and technology transfers to developing countries must not be fettered by intellectual property rights.
15. The South African government's position in the UNFCCC processes must properly represent the interests of the people (COSATU climate change policy booklet).

Whilst all 15 principles are important, some of the participants, namely, Jacklyn Cock pointed out that the above principles link sustainability and justice. According to Cock linking the two notions entails finding a balance between short-term goals (sustainability) which in the main includes providing and/or defending current jobs, and long term goals (justice) which is the preservation of life (human and nature). Cock contended

I think the first principle of that climate change policy framework which got accepted by the COSATU Central Committee and all fifteen principles are important because they link two things. They link sustainability and justice, and many people think of them separately. And such as the capital thinks just to worry about sustainability. It does not link sustainability and justice. And so the first principle of the 2011 COSATU Climate Change Policy Framework said capitalist accumulation is the underlying cause of increase in excess greenhouse gas emissions (Interview: Prof. Jacklyn Cock).

Lebo Mulaisi, the current Social Development and Policy Coordinator for COSATU, noted that it is impractical to speak of a climate change without addressing the issue of a just transition. She contended that organised labour must grapple with what a just transition should look like. In the literature review chapter, this view is well clarified by Cock (2020) as she contends that there is no blue print for the just transition away from fossil capitalism, and further contends that trade unions must then lead the debate for a deep transformation (regime change).

Due to many meanings ascribed to the notion of just transition, it was apparent in the study, that within COSATU there are those who support a narrow reformist approach while others supported a regime change. Cock (2012) explained that, chiefly there are two broad approaches to just transition i.e. a regime change or a paradigm shift. According to Cock the paradigm shift, advocates a shallow, reformist change with green jobs, social protection, retraining and consultation whilst the 'regime change' approach advocates for transformative change which is an alternative growth path and involves new ways of producing and consuming.

This distinction is critical to the study especially since all the participants in this study spoke about the importance of a just transition for all the stakeholders in the economy. Labour, the state, local communities and environmentalists unanimously agree with the need for a just

transition, however, a just transition may mean different things different group formations. Some of the participants highlighted the gender inequality which is promoted by climate change and its impact on livelihoods of women. Some spoke about the pertinent socio-economic issues i.e. bread and butter issues. While many participants agreed that a just transition is noble idea, there remain contestations over the exact details of transition and what it will mean for everyone concerned. While others were concerned about danger posed by fossil capitalism, others were more concerned about possible job losses.

Cock (2012) clarifies that a “‘paradigm shift’ entails a change in ways of thinking about the issue, which could be ‘thin’ or minimalist, whilst a ‘regime change’ implies a fundamental transformation in the way power and resources are distributed, and economic activities are regulated and controlled” (Cock, 2012). The following excerpts from different participants illustrate some of the meanings ascribed to just transition.

And that is why there is need to be a just transition because with a just transition you can identify okay, we are moving towards this, lets reskill workers let us create new opportunities. You formulate all these plans of how we can move workers largely at Eskom and the coal mines towards these jobs and let us not forget there is also trucking. These trucking jobs are at risk, you have cleaner, you have security guards at all these facilities. You have surrounding communities who make money from people working in the mines and coal fire power stations. So, the positions of the unions have always been that renewable energy must be socially owned (Interview: Melisizwe Tyaisi)

If I am a worker I would ask, and I am working in the coal mine. So, when is my job secured because I know this mine can operate for forty years or so? So, I want to know, so this is for Kusile right and this mine can operate for forty years. So, what are you telling me that in ten years’ time we are closing this mine and then what job then do I have after that? You know its genuine the principle is genuine, but the plan is not credible, it is not clear, it is not crystal as to what happens to me and my family (Interview: Ruddy Dicks).

Yes, you cannot talk about or you cannot only raise issues around how climate changes impact many people and communities without highlighting the role that women play. Women are the ones that are adversely affected, and they are the ones who come up with adaption mechanisms. These are those which are carried from generation to generation which are in the marriage system or they are the ones who develop as a situation change around them. So, if you talk about climate change and the impact there is no ways that you can have an oversight of how it impacts negatively on women and children (Interview: Makoma Lekalakala Lekalakala).

While many agreed that a just transition is noble idea, there remain contestations over the exact details of transition and what it will mean for everyone concerned:

They also take up wider socio-economic and political issues. Bread and butter issues on the shop floor are very important... And an economic cost that is increasingly coming but then there is this tension between that socio-economic project of the federation and of the unions and the interests of individual members in the transition. And that positions them differently in relation to what is the just transition because justice is also to build food security... Justice is also water security, but you know, for your own members it plays out differently. Yea, because one can interpret it in a way of providing social protection for those workers whose jobs might be lost in the transition. Or you can interpret it you know there is a spectrum, and the other end of the spectrum is okay, it is just if it is a fundamental transformation of the economic system. And you can see you know where COSATU might position itself and where SADTU might position itself on that spectrum (Interview: Louise Naude).

Lastly, whilst participants spoke about how the policy document was developed and they also spoke about the content of the document, however, there was no empirical evidence that COSATU managed to advance with success, any of the above fifteen principles. In my view the fifteen principles in the policy document were cornerstone of the policy document. Consequently, any deviation from these principles will render COSATU's climate change policy commitments questionable to workers and to the international community.

It is important to note that according to recommendations made to COSATU on the 21st October 2011 at the SWOP Breakfast Presentation on Labour and Climate Change by Jane Barret, in terms of Labour's Response to Climate Change, upon adopting COSATU Policy Framework in pursuit of a transition to low carbon and climate resilient society, including the 15 principles, COSATU was to develop internal capacity to support affiliate activities. COSATU affiliates on the other hand were to develop their own sectoral understandings and engagements on the climate change and the just transition; they were to build research and education capacity as well as to educate their own leaders and members.

Regrettably, there is no evidence to prove that any of SWOP recommendations were implemented, save for the three research studies conducted in Poultry, Chemicals and Mining as well the continuation of the reference group since 2010 and the formation of COSATU Nation Climate and Energy Committee. The three studies indeed helped Farming/Agriculture, Chemicals and Mining to understand the dynamics within their three sectors but none of the other 19 out of the 22 affiliates conducted similar studies in order to develop their own sectoral understandings and engagements on the climate change and the just transition. There was no evidence from the data that suggest that COSATU affiliates built their research and education capacities on climate change and the Just Transition. There was also no evidence from the data that points to Affiliates educating their own leaders and members. Nor was there any evidence to suggest that COSATU developed internal capacity to support affiliate activities.

The participants mentioned that the reference group was funded by external donors such as the WWF (discussed below) but as soon as the funding stopped, it became difficult to do workshops, they even had to sometimes do some presentations around 2015/2016 in worker education training sessions organized by COSATU's education department in three provinces. This was due to the reference group not having a budget, after WWF funding stopped. There was also no evidence that there was any special funding created by COSATU or some financial support from the affiliates.

Therefore as part of my findings I would recommend that COSATU revisits its ecological commitment of pursuing the fifteen principles, without fear or favour. Furthermore COSATU must implement the recommendations made by SWOP on the 21st October 2016.

Noting that climate change is a direct result of fossil capitalism and a complete regime change will create an environment conducive of a transition to a low carbon and climate resilient society. I contend that a deep transformation (a just transition) is not possible under the current economic mode.

In looking at methods through which the COSATU climate change policy was developed, this study looked at whether COSATU supports a deep transformative change or just a narrow reformist transformation and it came to a conclusion that the COSATU stance supports a deep transformative change, in theory, but in practice it promotes a narrow reformist transformation.

Noting that Sweeney and Treat (2018) contend that the ‘just transition’ will require a societal shift of revolutionary proportions’ for COSATU and its affiliates this is a revolution in pursuit of just transition is still far-fetched.

Theme 2: Red-Green Alliance: An uneasy relationship

The study revealed that the reference group was made up of representatives of all twenty-two COSATU affiliated trade unions and activists from key environmental justice organisations. One of the participants, Cock, noted that though this was not a formal alliance, the coming together of union representatives and environmental activist to form a reference group translated to red/green alliance. Cock contended “so it was drawing on if you like a relation power, it was a red-green alliance, the way to drive a just transition but it was not formal” (Interview: Prof. Jacklyn Cock).

All participants in this study spoke about the red-green alliance as NGOs such as the WWF, Green Peace, Earthlife South Africa and AIDC were repeatedly mentioned as having worked closely with COSATU on the climate change issue. Some of the participants in the study came

from WWF and Earthlife as they were also part of the reference group. So, in essence the participants in the study were from COSATU affiliates, Government, Environment organization, Business and Academia. Their individual inputs were intellectually insightful and informative. Because of the diversity of the NALEDI Climate Change reference group it was easy for all participants to talk on all issues including the red/green alliance as this was the composition of the reference group in the first place.

Although in principle a working relationship between labour and environmental NGOs would benefit both parties, there remains suspicion and doubts especially from hard core unionists who simply cannot trust NGOs in general. Though one participant, Jane Barret, who joined COSATU in the 80s noted that prior to the unbanning of the ANC in the early 90s there was a good working relationship between COSATU and NGOs. However, as years went by there was “cynicism about NGOs and a bit of hostility” (Interview: Jane Barret). According to Barret, until the formation of the reference group there was a long period where there was no form of alliance NGOs and the trade union movement. This uneasy relationship was well encapsulated by one of the participants, in the following excerpt:

Yes, look I think those in support of the policy were obviously concerned about the impact of climate change on workers, and the fact that a lot of the debates in policy is driven by NGOs that there hasn't been much of a labour voice. It was really about having a working-class perspective and voice of workers. I mean historically you know there has been an Association of Environmentalists which is sort of a middle class, bourgeoisie type of agenda, people who sort of are trying to save penguins, but they do not care about humans... So I think people that are perhaps will be against policy on Climate Change would either be that they do not think it's relevant to them because they are not familiar with the issues and they see it as a white, middle class thing. They do not see how that impacts on their own lives (Interview: Liesl Orr).

One participant, Lebo Mulaisi, noted that when she started working at COSATU climate change was perceived as a white person's issue and an issue which only concerns scientist and it could not relate to workers. As a result issues pertaining to bargaining were prioritised over climate change. Consequently, climate change being a peripheral issue, during workshops, they had to

explain climate change in layman's terms, for example, the fact that "as disease becomes rampant because of the droughts and the poor are the ones on the receiving end when it comes to contracting illness whilst the rich evade those severe illnesses because they are able to afford private health care insurance" (Interview: Lebo Mulaisi).

One participant, Makoma Lekalakala, explicitly stated that there was no need to consider building a formal red-green alliance. She argued that:

I know people talk about the red-green alliance but for me, I feel that there is no need for one to have formal alliances. The issues are upon all of us. So the issues being upon all of us, we should not be saying no this is a worker's issue, this is an environmental issue. Because when workers leave their industries or when they leave where they work, they are part of the community and in that community if there are issues, the issues is also impacting. I know that the general talk about people saying the red-green alliance is important. But I feel also that it is part of presiding or maybe socialising the issues, we have as a community. But the minute we start saying this is a worker issue, this is a community issue we are not going anywhere (Interview: Makoma Lekalakala).

I wish to reiterate a point I made in the literature review chapter, namely, that according to Cock (2019) the red/green alliance could be a powerful driver of transformative 'just transition'. For example, the environmental organizations can lead campaigns on preservation of the environment whilst trade unions lead similar campaigns on sustainable jobs that will prevent harm to the environment, to the health of the workers and the community. There is evidence that environmental organization have conducted extensive research on environmental degradation at the hands of fossil capitalism whilst trade unions are in a much better position to exert pressure on the captains of industry about harm to the environment, since they interact with Corporate on day to day basis. This will be made possible if trade unions will adopt environmental policies, pursue such policies and move away from collective bargaining politics that only promotes economic and political unionism (literature review chapter, p.32).

I therefore contend that a red/green alliance will be a formidable force against fossil capitalism. I have noted that Lekalakala in the above excerpt does not reject red/green alliance altogether. She

merely points out the fact climate change is not a worker issue or environment issue but it is a community issue and does not require any labeling. I agree with Lekalakala that climate change / the climate crisis is a community issue and it does not need labeling however, since there is a climate emergency, it becomes necessary form red/green formal as well as informal alliances in order to defeat an organized and powerful clique of fossil capitalists. Therefore, the red and green need to come together and act in an organized and tactical fashion.

Theme 3: External pressure/ influence

The study reveals that the just transition policy of COSATU was born out of various external pressure groups both internationally and locally. Organizations such as the ITUF and the Trade Unions for Energy Democracy, as well international policies such as the Paris Agreement, as well as conferences like CORP 17 were credited as having given COSATU the impetus to adopt a policy position on climate change.

According to GSD Chauke, Lebo Mulaisi, Melisizwe Tyaisi, Jane Barret and other participants in the wake of COP 17, “COSATU as a major player in the economics and social atmosphere in South Africa” (Interview: Chauke) is needed to make an input into the South African response to the greenhouse situation which affects the climate and a lot of the thinking around climate change was heavily influenced by the ITUC the International Trade Union Confederation. Apparently, ITUC They had already formalised a position that they were pushing in the conference of the party negotiations, around the just transition to a low carbon economy. Consequently, most of COSATU’s policy positions are anchored around the ITUC position. One of the participants noted

Noting that higher fossil fuel was carbon intensive, where it had a negative impact on the working class as well as the poor. So that kind of how we then saw this as a good entry point to introduce workers to the notion of climate and why there is a need to move to a low carbon economy. So, a lot of this was formulated for us by the International Trade Union Confederation (Interview: Lebo).

Barret added that after an International Transport Federation (ITF) Conference it was noted that transport was the biggest emitter of carbon dioxide. SATAWU which was among the two unions that put a draft resolution on climate change in the COSATU 2009 congress was encouraged by the ITF since SATAWU was also affiliated of ITF and COSATU, locally. Barret contended

So, you know there was probably form the early 2000's discussion in the International Transport Union, Transport Trade Union circles... Yes, and there was also the emergence of a global network of labour unions as well as labour related NGO's ... Trade Unions for Energy Democracy [TUED] (Interview: Jane Barret).

Noting the external as well as the internal influence which led COSATU to adopt the climate change policy documents and the resolution to pursue a low carbon economy, the study also reveals that in developing the actual climate change policy document COSATU followed the International Labour Organization (ILO) guidelines which are designed at helping trade unions to formulate policies. According to the literature review chapter, these

Guidelines facilitate a structured, coherent, democratic and transparent policy formulation process. According to the ILO there are seven crucial stages that trade unions must observe when developing policy. These are Preparation, Issue identification, Formulation, Adoption, Action planning, Implementation and Monitoring and evaluation" (ILO, 2015(b), p.vi -vii).

Whilst it is appreciated that the development of COSATU climate change policy document followed the guidelines by International Labour Organization (ILO), it is concerning that the actual strategy was formulated by the International Trade Union Confederation and not by workers. This will essentially explain the reluctance of certain affiliates to fully embrace the COSATU climate change policy document in its current radical form. It is radical in the sense that the policy document boldly identifies capitalism as the root cause of climate change.

Therefore, the logical response is to do away with the cause (fossil capitalism); end carbon intensive services and products; re-skill workers and place them in alternative industries; use renewable sources of energy which are gas, wind and solar power and completely abandon the accumulative imperative / the growth paradigm. On the contrary, a non-radical approach requires

a reformist approach which capitalist as well as capitalist sympathizers have no problem to endorse.

Theme 4: Political alliance hindrance

Documentary analysis revealed that whilst COSATU is member of the tripartite alliance the alliance does not embark on any campaigns as an alliance. The only campaign which the alliance conducts joints are elections campaigns (COSATU Political Discussion Document Possibilities for Fundamental Social Change).

During one of the interviews, Tyaisi stated that in 2016, he was invited by the SACP to come and give input on energy, at the time when the issue of nuclear energy was on everyone's lips, at the time. According to Tyaisi this is only time (2016) when SACP started engaging and looking at Climate Change. This proves that despite COSATU 2009 resolution on pursuing a just transition to a low carbon and climate resilient economy, its alliance partners were not engaged on the subject. It also points out to the fact that COSATU has not engaged the ANC as a ruling party on the most pertinent issue on the planet i.e. a just transition. It further proves that COSATU has taken a reformist approach to just transition and it is not yet in a position to call for a regime change because that will effectively mean the ANC as a ruling party will have to end capitalism and pursue an eco-socialist route. As a member of the Alliance this would not be an easy call to make, not that COSATU is even considering it at this stage. However, this study shows that at the rate the climate crisis is unfolding (the revenge of nature) a regime change is inevitable.

The capitalist logic which promotes the growth paradigm is unsustainable and it have reached its natural limit. In breaking the stereotypes about climate change and fossil capitalism, COSATU will have to either confront the issue head-on within the alliance or to leave the alliance and join progressive forces in the call for regime change. To reiterate a fundamental point made by Satgar (2018) in the face of the ecological crisis we are left with a stark choice to end capitalism or to die. Complacency leads to destruction of the planet and an end to all forms of life. According to Foster (2015), Foster and Clark (2016), and Parenti (2013) climate change, global warming and all catastrophic events are a 'retaliation of nature' / 'revolution by nature' against fossil

capitalism. Scientific evidence points to the fact that fossil capitalism has further increased the metabolic rift between humans and nature.

Finally, the literature review chapter, in this study, revealed that there are different types of unionism. I also contended that political unionist is not in a position to critic the political party they are affiliated to or the government problematic legislation and policies, if the party is the ruling party. This happens because of either political ambition or political affiliation or political party alignment. The data in this study reveal that COSATU is a member of the tripartite alliance, thus they are not in a position to critic fossil capitalism, at least in the open. It is one thing to have a policy that condemns fossil capitalism and it is another thing to act against fossil capitalism.

I therefore contend that COSATU has adopted political unionism whilst on official documents, statements, climate change policy document it claims to be a social movement union. This is a serious contradiction because an SMU has no political ties and is free of political alliance hindrance.

Theme 5: Environmental Racism

This theme addresses the issue of poverty and environmental pollution. Some of the participants were acutely aware of the way in which poor black communities are disproportionately affected by climate change. The following excerpt from an interview with Professor Cock, as a participant in the study and a member of the reference group since its inception in 2010 underscore this issue:

...by environmental racism is I mean how certain categories of people are disproportionately affected by climate change and everybody can see its poor black people who are mainly affected by climate change. Especially people living in cold ended communities and so what COSATU did was get the support of the ANC and in this idea of transformative process, which would address the environmental racism. And they went to a lot of effort to try and unify the labour movement on the relation between capitalism and climate change (Interview: Prof Cock).

Documentary analysis, particularly the COSATU climate change policy document speaks against environmental racism and claims that for COSATU a just transition must speak to and address bread and butter issues. According to the Policy document the just transition must alleviate poverty. Most of the principles in the policy document claims highlights environmental racism and COSATU challenges both corporate and government to tackle environmental racism. The following are policy principles that seek to address environmental racism

- A new low carbon development path is needed which addresses the need for decent jobs and the elimination of unemployment.
- Food insecurity must be urgently addressed.
- All South Africans have the right to clean, safe and affordable energy.
- All South Africans have the right to clean water.
- We need a massive ramping up of public transport in South Africa.
- The impacts of climate change on health must be understood and dealt with in the context of the demand for universal access to health.
- A just transition to a low-carbon and climate resilient economy is required.
- We need a carbon budget for South Africa.
- African solidarity is imperative.
- The ambitious legally binding international Developed countries must pay for their climate debt and the Green Climate Fund must be accountable.
- We need investment in technology, and technology transfers to developing countries must not be fettered by intellectual property rights.
- The South African government's position in the UNFCCC processes must properly represent the interests of the people.

It is clear that the above principles seek to address environmental racism. This means redressing environmental racism was at the core of the drafters of the policy. Similarly the three studies in Mining, Chemical and Poultry (reports are herein attached) that were conducted by the reference group also highlighted environmental racism as a problem in these sectors. Some of the participants noted the following

So, with adaptation I think because of the inequalities that we have in the country and some of them stemming out of the electricity generation that you find people next to coal

mines unable to have their own livelihood, unable to have their own kind of food gardens, not having water. I mean as an example, so adaptation becomes an issue and to alleviate poverty. Adaptation is quite important because how people generate their own food, how people would be able to have to energy emittance measures, how people would have to ask of the rights that we have on energy, which is part of the economic development goals. So, adaptation becomes very, very important. I think technology it's not left out of both mitigation and adaptation (Interview: Makoma Lekalakala).

And you know when we did workshops with the mine workers because climate change is part of a bigger environmental discussion and we broadened it out. You know they would also talk about the exposure to toxins on the mining process. So, the pollution of water through the mining processes those kinds of things and the impact on local communities. So, you know the coal miners from Mpumalanga would talk about respiratory diseases in those communities because of the coal mine activities. So, you know obviously the discussion was more difficult when it came to okay so what about future of mining. But when the discussions started off with the broader environmental understanding and based on the experience of workers (Interview: Jane Barret).

Generally, poultry and chicken was being consumed by the poor. And therefore, if climate change was going to have a negative impact on that sector, then the consequences would be very dire. We were tasked to do a research in our sector. Other comrades also did, I think there was also research on mining on climate change impacting mining (Interview: Howard Mbana).

Documentary analysis reveal that even before the endorsement of the COSATU policy framework on climate change later in 2011 COSATU at the time was already concerned about environmental racism but it was not necessarily against the growth paradigm and green capitalism. Even though this is quite disturbing, it also explains COSATU's current lukewarm stance pertaining to growth paradigm and green capitalism.

COSATU is not vehemently opposed to growth and according COSATU green capitalism is not necessarily bad as long as it can provide jobs. This is evident in the manner in which COSATU deals with green capitalism (discussed in detail in the theme below).

On 12 April 2011 Zwelinzima Vavi, COSATU General Secretary at the time, made an input to the Madrid Dialogue on green economy and decent jobs, titled A NEW DEVELOPMENT PARADIGM. CHALLENGES FOR EMPLOYMENT, SOCIAL INCLUSION AND POVERTY ERADICATION IN A SUSTAINABLE PLANET, remarked

Now we all must find consensus around the need for a new global development trajectory. Most of the world's poor live in economies that operate within the framework that was historically constructed by colonialism. What colonialism has done, and the current global patterns of accumulation continue to reproduce, is the global division labour that has made many smaller economies vulnerable to global and climate shocks. For these economies to emerge out of these vulnerabilities, they have to industrialize (Vavi, 2011).

Though Vavi was spot on, in the above except, the rest of his input talked about the poor being pro-development; green jobs and to a larger extent he even condoned fossil capitalism under the guise of fighting environmental racism. In the same input Vavi further contended that

In the light of the above, the challenge faced by the developing world, and indeed the global community, is to ensure that countries in which the vast majority of the poor live have a strategic role to play in the new development paradigm. If we agree that the old pattern of capital accumulation, which paid little attention to the environment, social inclusion and equitable wealth distribution across and within the world's population, has failed the sustainability test, then we should also agree that we need to develop new poles of wealth creation (Vavi, 2011).

According to Vavi (COSATU's General Secretary at the time) 70% of exports in South Africa around 2011 were made up of petrochemicals, basic iron and minerals. He added that South Africa had a vibrant forestry sector, which consumes a lot of water and acknowledged that the

industries he mentioned contribute to climate change, but they are essential for short to medium term survival.

According to Vavi labour was not opposed to industrialize and to move toward low-carbon sectors, but the trade rules have closed the space to do so. Vavi contended that

We do not want to hold a gun to the head of the world's population. Left with no other path towards industrialization, some of us in the developing world will accelerate our industrialization by extracting our raw minerals, process them, and sell them to the global economy in order to raise sufficient foreign exchange to finance our long-term development strategies. Some of us will accelerate the pace of pulling down rainforests in order to sell timber for foreign exchange so that we can industrialize to an acceptable level. We need not follow this route if the patterns of global division of labour are properly laid out to guarantee global equitable development (Vavi, 2011).

It is clear from Vavi's address to the international community in 2011 that COSATU was well aware of the current socio-ecological crisis but Vavi fails to address Sweeney and Treat (2018) concern that "a transition that is 'just from the perspective of workers or "the workforce" but which fails to advance or help achieve the needed socioeconomic transformation' will ultimately achieve little in the light of climate-related and broader ecological concerns.

Sweeney and Treat (2018) concern simply recognizes that green growth and the growth paradigm stand against the fight for climate justice yet Vavi's address condones ecological exploitation and abuse; ecological degradation; profit accumulation; private ownership; cheap labour; fossil fuel depletion, domination; the markets and the so called invisible hand; the technological advancement aimed capitalist greed and capitalist's use of fossil fuels, in general.

COSATU in my view might be aware of the core systematic elements of capitalism but fails to resist them after having identified them. Being able to resist the systematic elements of capitalism builds an anti-capitalist attitude enough to sparkle an ecological economic revolution against fossil capitalism.

According to Vavi's address COSATU supports the accumulative imperative, a view advocated by market liberals and institutionalists. Market liberals naturally believe that markets will solve the ecological problems whilst institutionalists believe in the global and national regulations.

Noting that according to Vavi and COSATU, the regulations restrict the poor in advancing industrialization. This is a view that is not supported by bio-environmentalists and social greens in that they view industrialization as advancing fossil capitalism. The inference therefore is that COSATU's approach to just transition therefore amounts to a thin or minimalist approach. Whilst COSATU is concerned with environmental racism, it has become clear that the notion of environmental racism mean different things depending on one's world view approach.

Noting that the environment is not a substructure or a sub-system of the environment but the conversely the economy is the subsystem of the environment (Martinez-Alier and Schlupmann, 1987, p.107). Vavi's contention that poor countries 'will accelerate the pace of pulling down rainforests in order to sell timber for foreign exchange so that poor countries can industrialize to an acceptable level', is highly out-of-place or injudicious and it further exasperate and upsurges the metabolic rift. The destruction of nature cannot be used as a bargaining tool to get even with affluent economies.

Theme 6: Green Economy

The issue of a green economy drew mixed responses amongst the participants in this study. On one hand a green economy is seen as moving in the right direction if it is well managed and planned so that it grows into a labour intensive sector. On the hand critics argue that the discourse around a green economy defies the logic of a just transition and represents substituting one form of capitalism for another. One of the participants, Cock, argued against the danger of not dealing with the root cause of the ecological problem which is capitalism by simply adapting to the ecological crisis or mitigating the crisis. She contended as follows

Well because you see adaption is very dangerous, climate adaption because it accepts climate change as inevitable. That it is something we have to adapt to, so the language of adaptation is dangerous. So, is the language of mitigation because it does not address the

core problem and the core problem is the essentialist logic of the capitalist system and the way it exploits both people and nature... Well the problem with the green economy it's, we must not change the system, the system is fine. We must just introduce some green features and particularly renewable energy, the focus is now on, is becoming to be renewable energy rather than the fuel system. Which is unjust and unsustainable and by the way is very dangerous because it is a cause, the fundamental cause of the present pandemic (Interview: Prof. Jacklyn Cock, 2020).

This view was shared by other participants, including GSD Chauke who contended that capitalists are now moving the goal post by introducing adaption as opposed to transformation of the economic system which only benefits few individuals in the whole global economy and in the global population.

I am for transformation I cannot agree to adaption because you see the capitalists want us to adapt to what they create. So, they are going to move the goal posts. We adapt now as they continue the whole majority. Mind you the current system favours a few comrades. The people who are benefiting from the current system if you look at the wealth shares it is 1 or 2 or 3 percent of the world population which owns about eighty percent of the wealth of the whole world.

So, it benefits a few that is why then the narrative or the preaching of adapt cannot be acceptable. It cannot be acceptable it forces people who did not create this condition to adapt to something that they did not create or to adapt to something where they do not benefit anything. Now, it cannot be acceptable because the capitalist is going to push the goal posts and we are always going to adapt until we are told to adapt to die. Then it cannot be acceptable, so I am pro real U-turn and change that the world economy it's managed. How the world economy is generated, how the world economy is shared and then we are going to be able to harness the whole energy of the world to the benefit of all of us as citizens of this earth (Interview: Chauke).

The literature review chapter highlighted that Pillay (2010a) argue that the Green New Deal which was advocated by the USA, in South Africa it only benefited the white minority. He contends that the "green revolution" as it is termed advocates for clean coal, clean nuclear,

increase efficiency in energy use, decoupling which translates to continuing on the current economic growth path without depleting the resources and calls for taxes, regulations and subsidies. According to Pillay the Green New Deal is based on the accumulation (growth) imperative where wealth and possession is for the few whilst there is poverty and widespread dispossession of the majority.

I also contended that the logic behind clean coal, clean nuclear and decoupling is quite confusing for anyone who knows and appreciates the extent of devastation and the grief caused by fossil capitalism. It is an undeniable fact that coal, even in its converted state, it pollutes the air and its use emits carbon dioxide which causes various diseases including respiratory diseases, among others. It is also known that nuclear energy is just as harmful, to humans and the environment because it is carbon intensive and emits dangerous waste.

I also pointed out that according to Pillay (2010a) Foster argued that, efficiency leads to more production which is tantamount to an industrial treadmill for capitalist; coal sequestration is an unproven technology and the promise of clean coal amounts to a false promise.

It is therefore clear that decoupling just repackages the coal industry and further justifies the coal mining and coal fired power stations. Importantly decoupling is market driven and is not driven by the needs of society and ecology. Pillay's argument is proof that capitalist exist only for itself.

Despite all of the negatives that are attached to green capitalism some of the participants still support the green economy. Tyaisi who works at NALEDI was of the view that the green economy cannot be separate from the mainstream economy. Whilst Mulaisi, the Policy Co-ordinator at COSATU, contended that there is already a disinvestment in the sectors that are dependent on fossil fuels and this presents an opportunity in the green economy for a creation of labour intensive jobs. According to Mulaisi if workers are engaged in green jobs the transition will be made easier because workers will be able to adapt to the changes easily. Mulaisi contended

So, if we leave things like that and think that they will not be a transition we be fooling ourselves and I think we will be binding workers to a situation where there are unable to

adapt to the changes. So being mindful of that I think we understood that a transition will be happen with or without us. It it's either we will be forced to transition because of a disinvestment in fossil fuels. It is either we will be forced to transition because of catastrophic environmental impact. But a transition is coming so our responsibility especially as a mass leader of workers is to prepare them for that move and I think how we do that is through the prospect of transitioning. But through a process of justice where we transition them to a green economy where they can continue to enjoy decent work but in the context of a low carbon economy this time (Interview: Lebo Mulaisi).

Mulaisi simply pointed out the fact that COSATU supports the accumulative imperative that is advanced by the IMF, the WTO and the World Bank through 'green washing' with few global and national regulations and standards. In light of the preceding discussion on 'Environmental Racism', particular Vavi's address in 2011 at the Madrid Dialogue on green economy and decent jobs, Mulaisi's contention did not come as a surprise because COSATU had clearly communicated its support of green capitalism as packaged under the accumulative imperative discourse.

It is clear from Mulaisi's assertion that even post Vavi's tenure as the general secretary of COSATU, COSATU has not deviated from their stance of supporting green economy, even though there are individuals within the federation that are against green capitalism.

According to Clark and Duvenargne (2005) accumulative imperative is advocated by market liberals and institutionalists. According to Pillay (2010) both the institutionalists and market liberals are not against the logic of the markets (Pillay, 2010 b, p.7) and this poses a serious ideological contradict for COSATU as it profess to condemn capitalism.

Theme 7a: Internal discussions and the adoption of the just transition policy

This theme broadly discusses the internal debates and deliberations amongst COSATU affiliates and environmental NGOs. In the 20 March 2015 Mail&Guardian article, Mabasa mentions the works of the COSATU National Climate Change Committee as well as the work of the NALEDI

Climate Change Reference Group i.e. in conducting workshops, engaging workers at shop floor, the development of worker friendly material used for educational purposes. Mabasa also explained that the NALEDI Climate Change Reference Group is responsible for the technical aspects such as research and the development of material. The core argument that is advanced by Mabasa in the article is that COSATU pursues a low carbon economy and points out how this would benefit both the earth and humans and ends by pointing out that COSATU has developed a policy framework which advocates for a just transition toward a low carbon and a climate resilient economy. Among other things Mabasa pointed to the increasing number of climate refugees, globally and argued that it is the working class the poor and developing countries that are mostly affected.

The participants pointed out that NALEDI organized workshops that were partly funded by the WWF and that although all COSATU affiliates were invited to attend and contribute to the internal discussions, a select few, such as NUMSA, NUM, FAWU, CEPPAWU and SATAWU, were credited by participants in this study as having been influential.

According to Chauke FAWU played a major role in the work of the reference group since agriculture is the sector that is mostly affected by climate change, save that NUMSA and NUM also represents members from sectors that are also affected by climate change.

All participants contended that there were robust debates in the reference group meetings and workshops, where affiliates expressed different views. The following except from Makoma Lekalakala captures the sentiment of most participants.

We had robust discussions and you can imagine where there is NUM, there is NUMSA, there is climate justice activists what sort of robust discussions took place. I think we did a very good job by being the facilitator of this reference group which was seen as neutral and a research arm and they will be able to also invite other federations and then other research arms. Like they would invite DITSELA, they would invite your NUMSA Energy Research group, NUM, SADTU and also other energy and climate justice organisations or environmental organisations like your WWF, your Million Challenge

Jobs Campaign, and also including inviting government for all, like Treasury or the Department of Energy, Department of Environment (Interview: Makoma Lekalakala).

The data showed that FAWU, NUM and SATAWU played more prominent roles in research. Chauke contended FAWU conducted research and made much input in the reference group because they were at the receiving end, of the real impact of Climate Change. Chauke contended that

there were unions in the form of FAWU that time which were pro limiting of greenhouses gases and we had affiliates in the form of NUMSA and the NUM's of this world who were feeling that this not the right time to curb the emission of greenhouses gases because it is going to impact negatively when it comes to job creation and retention. So those debates continued but at the end of the day I think you know as a Federation it was seen that we cannot be left behind by the changes in the world. When it comes to climate change advocacy (Interview: Chauke).

In support of Chauke's assertion a Poultry Industry Case Study conducted by NALEDI titled 'Developing a Comprehensive Policy Response for COSATU affiliates in the Industrial Agricultural sector on Climate Change' reported that "it is as if the capitalists have managed to change the natural resources to a point where it almost impossible to run away from their conventional mode of food production'.

In discussing the internal discussions and the adoption of the just transition policy Rudy Dicks the former Director at NALEDI contended that

Climate Change activists are sometimes not very pragmatic because they were some Climate Change activists in there. I remember the first workshop, in actual fact the first workshop we endorsed the policy was in Durban. There was a lot of contestation between the kind of pragmatists, some of us who were there and then others got some of these crazy guys in also in terms of this conversation. There was one guy who was doing his book and he started he is representing, so he says coal must remain the home and some of the NUM workers were saying you know, you are not launching your book here... (Interview: Ruddy Dicks).

The participants in the study took time to explain that the policy was developed first and at a later stage the in-depth research was done (Interview: Liesl Orr). One of the participants, Jane Barret, clarified that the policy did not take that long to develop and after the policy was endorsed by COSATU CEC the reference group continued. At the reference group the participants attended various seminars on topical issues that were identified, such as energy, water, and research as well as worker education. According to Barret research and education are linked and from the workshops workers shared their own experiences, in their respective sectors. According to the participants this is how workers, who were mostly shop stewards were engaged in the process of the implementation of the policy.

Whilst one of the participants, Khwezi Mabasa, explained that from the reference group, COSATU created a Climate Change National Committee and the reference group members were then taken to this new committee which mainly had three legs or sub-committees responsible for 1) the education program, 2) to facilitate social dialogue with other partners and 3) policy advocacy. The literature review chapter highlighted the worker and workplace-centered approach is also reflected in the ILO's 2015 Guidelines for 'just transition' which calls for skills development, proper Occupational Safety Measures, the protection of rights in the workplace, social protection and social dialogue (A Report of The 'just transition' Research Collaborative, pg. 13).

The above excerpts reveal that there was robust discussion in the development of the climate policy document. The documents were not just thumb sucked or dictated by technocrats. Barret remarked

So, the figures that you see in the booklet, I did the research on transport emissions. There were other people who did the other bits of research. So, the figures that you see for reducing carbon emissions and creating jobs are all, all came out of quite in-depth papers that were written. So, it was not thumb sucked? (Interview: Jane Barret).

It is important to note that following the drafting of the policy framework, workshops and seminars with shop stewards and officials were held in a number of provinces. The million jobs campaign which was advocated by AIDC was also expounded via seminars and workshops.

The idea behind the workshops was that union official and shop steward were to disseminate the information to different affiliates. The following excerpts depict this issue:

So, we would do and convene the reference group meetings and because it was a joint project between COSATU and NALEDI. We would do workshops, seminars and various topics related to Climate Change from carbon tax, to food security or food sovereignty and to fracking, health... It was endorsed by CEC. The Central Executive Committee and you that the CEC is the highest decision-making structure in between Congresses. So, the CEC adopted the policy it was in let me just double check but in 2011 (Interview: Melisizwe Tyaisi).

What Tyaisi stated in the above excerpt was supported by copies of meetings dating back to June 2012; seminars and workshop reports as well as copies of the three research reports of the studies conducted in Poultry, Chemicals and Mining sectors. According to Barret initially all unions were invited to participate but there was a process of self-selection and only those who had the capacity and interest got involved and because it was not a COSATU constitutional structure, there was no requirement that all affiliates must participate. Mulaisi took time to explain how everyone could not have initially been involved in the brainstorming process.

So, climate change is a very technocratic subject, you could be bogged down into the scientific jargon and the scientific reasoning of climate change and as an increase and CO2 deposits. So, we eliminated all of that. So, what you see when you literally read the policy is that it's easy to understand. More so that we related to the bread and butter issues of every affiliate of COSATU, so we have related issues of climate change to transportation issues. How it would affect your transport to go to work every day. How, it would affect the price of your food on a day to day basis. How it would affect your health on a day to day basis. So, what we have even done is we have not made climate change an NUM, SATAWU, let me see LIMUSA to some extent, SATAWU to some extent, the farm workers were still with us, FAWU. So, we have not limited to a specific number of affiliates. We have broadened the scope by attaching the issue of climate change to your bread and butter issues. So, once we cracked that we made climate change more palatable for our affiliates to grapple with. So, we have taken out all the science (Interview: Lebo Mulaisi).

Theme 8: Million Climate Jobs campaign

Some participants mentioned that COSATU was involved with the climate jobs campaign coordinated from the AIDC. The campaign proposed a move away from fossil fuels and closure of coal mines whilst providing alternative employment. According to one Barret, the idea was to look in detail at different sectors where jobs could be created as part of the process of either reducing emissions or mitigating emissions. A lot of research was on the million jobs campaign was conducted AIDC and not by the reference group or by COSATU or NALEDI.

According to Cock, evidence was presented to the reference group, that proved that the campaign could create three million jobs and she added that the million jobs campaign could go a long way towards addressing the climate job losses which the union is currently facing. Cock pointed out that

COSATU is in a terrible position because on the one hand, in the short term, in the short-term worker's interest, it has to protect workers' existing jobs. But in the long-term workers are also part of the community, you suffer all the health problems that pollution of coal produces (Interview: Prof Cock).

One of the participants was skeptical about the million climate jobs campaigns, especially on the viability of the said jobs. The following excerpts accentuate this issue:

I always talked with Brian and kept a kind of arm length and I said yes, we would like the one million jobs, but I do not think it is possible. You know because your evidence is not very clear. Tell us when you are going to do this stuff you know and how you are going to do it. Who is going to fund it you know? (Interview: Ruddy Dicks).

Theme 9: Funding the reference group

According to the participants the work of the reference group was funded DBSA and WWF, respectively, whilst NALEDI and COSATU undertook to educate and capacitate unions about Climate Change. However, some participants were sceptical of being funded by NGOs who

could also have their own interest and to necessarily interest concerning labour. One of the participants held a dissenting view and contended as follows|

Yes, workshops were informative but if you attended the last one until the end you will have heard my last input. Where I said the one problem with the workshops of COSATU organised by NALEDI is that we invite the same minded organisations to come to a workshop. And when you do that, you are actually channelling the outcome or the seminar. So, I raised that and the other thing that I did not raise because I know it's controversial, but I can raise it with you because you are a researcher. The funding, you see if you depend on private funding like on the NGOs to come and find you to deal with issues of this nature or some or the debates and you will find the organisers knows that this person has got interest. So, they will want to channel this based to suit the position of the funder. In this case it is FES. And I think they had their own position. I may not be knowing it, but I think they do have their own position. Because they do have interest on the issue. You cannot fund something that is not an issue (Interview: Baloyi).

Theme 10: Top -down approach: workers response to a just transition policy

While union leadership and specialist policy makers were at the heart of drafting COSATU's policy, workers in the grassroots were not side-lined. Participants in this study revealed how a decision was made that selected union representatives or shop stewards who were trained in workshops and road shows so that they could train others too and they would also bring up real bread and butter issues from the workers on the shop floor.

It was clear from the participants that ordinary workers were represented in the Reference Group and well as in the COSATU National Climate Crisis and Energy Committee. I can understand this being the case due to the technical nature and the level of the discussions and the planning involved. Also considering that in terms of policy development COSATU has Policy Specialists that spearhead and drive policy processes.

Liesl Orr made an interesting observation in that even though the ordinary and general workers were not involved in meetings and workshops, the shop stewards who attended these meetings,

seminars and workshops were in fact workers themselves. I am inclined to agree with Orr as the only difference between ordinary workers and shop steward is the fact that shop stewards are elected representative (worker leaders) who represent worker constituencies whilst workers have no constituencies of their own but form part of a constituency that is represented by a shop steward. Thus, it is safe to conclude that workers were involved in the policy formulation process via the involvement of their elected worker representatives.

Mabasa explained that after an area work of the Reference group was complete, including putting together the policy document it would be presented and explained to NOBs who would not only endorse the document but also thank them for helping them (NOBs) to understand the issues around climate change. Mabasa explained that in the workshops there was a small group of ordinary workers who would attend but the main aim of the workshops was to equip persons who were going to disseminate information in the respective affiliates. Mabasa remarked

...it was officials of unions and now and then you would have workers attend now and then but it was a few. It was very rare a small representative if I were to say in each workshop calculate the percentage, I would say in each workshop probably twenty percent or twenty percent of workers. But that made sense because remember our strategy was that we were training the trainers if that makes sense (Interview: Khwezi Mabasa).

Mulaisi took time to explain the process as follows

So, the worker participation comes in the actual development of the actual policy framework. So, this is why the reference group members were also made up of union representatives. Who would sit on the reference groups to contribute to the content of the actual policy framework. So that is the first function which workers and workers representatives were consulted. I think the work that we then did after the actual adoption of the policy at the level of congress was the worker education particularly on issues of climate change. That has happened quite extensively we have had a process where we have gone, I think NALEDI should also have indicated this that we have been on a number of road shows to educate workers as to what issues of climate change is. What is the policy, the policy development process was and what the policy really means for workers moving forward? So those are the two processes that have been followed to date

to involve workers in the actual development of the policy framework, to take it to the level of congress for its adoption and to further conduct worker education post the adoption of the actual policy (Interview: Lebo Mulaisi).

According to AFADU post the split from FAWU the workers have been informed about climate change and of how policies should be created, and they should be changed to benefit them in the long term and of how policies should be created, and they should be changed to benefit them in the long term.

According to Chauke, who comes from AFADU, education is key, thus workers are being informed at union level. Howard Mbana also from AFADU contended that whilst at FAWU besides the interactions with NGO at the reference group meetings and seminars, they would go all around, and have their own sessions at the climate change focus group and also hold workshops around the country. Mbana pointed out that they even went to Western Cape interacting with other people and other organisations in the environmental fields... (Interview: Howard Mbana).

The inference from Mbana and Chauke's comments confirms Chauke's earlier assertion that FAWU really took the issue of climate change seriously and it also confirms that the role of shop stewards in the meetings, seminars and workshops was to make input and also to take the information and disseminate it in their respective affiliates. The same level of engagement and enthusiasm was evident in SATAWU, NUMSA and NUM . The latter saw some of its members as targets thus their stance to defend coal jobs. Rudy Dicks and Khwezi Mabasa stated that the COSATU National Office Bearers [NOBs] and the Central Executive Committee [CEC] were very happy to endorse the climate change policy document. They saw it as revolutionary. According to Rudi Dicks

I think they kind of like, in a sense, being bought into it because they knew the implications of not taking a decision around this... There was overwhelming support from office bearers. There was overwhelming support from the Central Executive Committee when we presented it (Interview: Ruddy Dicks).

The following interview excerpts give an indication of how workers received COSATU's just transition policy:

And the workers were amazingly receptive, you know there was not the resistance and the kind of suspicion that a lot of people said would happen. We just did not find that at all. We found that when we got workers in the room and you asked them about what they were observing, especially in the rural areas. Those that still had some home connections to rural areas. You know they were talking about how they had noticed different rain patterns and so on. So, we got workers to really understand from their own experience what the effect of Climate Change was... Well as I say you know it did not stay with the reference group, they were these workshops and so on and I think if you added up all those people. Probably the discussions reached maybe directly a thousand people and those thousand people had been engaged since then in various you know even if its informal (Interview: Jane Barret).

I would think that it varied. There are shop stewards and workers that were very well informed and there are those that had no idea and could not link the issues to their workplaces and also to what they are confronted as a ...[inaudible] as a whole. The response was varied but what I think was good was that people who were resource persons and who presented in workshops spoke the workers' language. Very important that you understand when you speak their language. Which means a whole lot of stuff much easier ...[inaudible] and tried to speak to a people who have a particular focus, a particular interest and then you speak above their heads or who do not link what you are speaking about to what they are confronted with on a daily basis? It does not make sense; I think we had people who really knew their stuff and participation and presented different people of society (Interview: Makoma Lekalakala).

The following interview excerpt captures some of lingering doubts on the effectiveness of relying on shop stewards to elucidate climate change issues at the grassroots level:

Okay, so within the reference group, there were representatives from each affiliate. Which would have been the officials, you know what I mean. It would have been the research and policy person from the union or whichever person was chosen. So, it was

not members sitting in the reference group. But then there were programs which took it down to members. And that would have gotten to members and the reference group members from the affiliates were meant to take it up obviously in their own union, but you know there is always this problem with this model of sort of trainer the trainers. You know that it does not always go down to every single member (Interview: Louise Naude).

Literature review revealed that the just transition and an alternative to Capitalism has to be built from the bottom up in a process of democratic participation led by the labour movement. Cock (2018b) contends that

There is no blueprint for a democratic Just Transition away from fossil fuel capitalism. Such an alternative has to be built from the bottom up in a process of democratic participation led by the labour movement. At present the idea of a Just Transition is an empty space—it is up to us to give it content and strategic direction. Change is inevitable. As Jason Moore writes, "Capitalism will give way to another model or models over the next century". Our challenge is to ensure that the change is just.

Upon reading the literature and conducting the interviews, it is clear that the commitment of COSATU affiliates, to environmental politics, and the just transition varied. My preliminary finding therefore, is that COSATU must lead the transition to eco-unionism or Social Union Movement unionism which could be easily complimented by democratic eco-socialism which in turn will foster an interest in just transition across all affiliates. The time of shouting empty rhetoric and slogans against capitalist and not taking action is over. Action for COSATU would mean calling for the transformation of the current economic system. One way of providing a leadership role on the subject is to hold workshops and special summits on the ecological crisis, after having partnered with like-minded organizations, for content support and funding.

Theme 11: Nedlac engagement and environment politics

COSATU holds a permanent seat in NEDLAC where all major economic policies are discussed between the government, business, and labour. Despite having this influential position, some of

the participants in this study felt that NEDLAC engagements on the just transition policy or lack thereof represent a missed opportunity for labour steer state policy in response to climate change.

From some of the responses given it seemed that labour supports carbon intensive jobs (in the interest of defending jobs over human life and nature). This came as a surprise because when COSATU defends carbon intensive industries it is acting contrary to principle 8, 9 and 11 of the climate policy document which were adopted in the 2012 Congress and were unequivocal in that Principle 8 called for a just transition to a low-carbon and climate resilient economy whilst Principle 9 declares that South Africa needs a carbon budget and Principle 11 talks of ‘an ambitious legally binding international agreement designed to limit temperature increases to a maximum of 1.5°C is essential as an outcome of the UNFCCC process’.

Noting that some participants felt that COSATU supports carbon intensive jobs and missing a number of opportunities to change National policies and to make a permanent environmental footprint in this generation. Professor Jacklyn Cock, also a participant in the study noted with a bit of disappointment to the fact that that “COSATU was strong. It introduced the concept of climate change and the need to confront it with a set of policies into the country but COSATU was not involved with the National Development Plan initiative because it felt ‘that was part of a neo-legal framework which disregarded workers’.

Cock contended that in terms of climate change the National Development Plan sought to find market-based solutions, on things like carbon training; ecosystems services and general views on clean coal but despite an invitation to Labour, COSATU never came on board. Chauke on the other hand, pointed out that the challenge in South Africa is that we enact regional and national policies that match international standards but we lack in monitoring and implementing them and this was the case with COSATU but he generally felt that COSATU indeed represents the voice of the workers at NEDALAC. Whilst Mabasa pointed out to the fact that that there were other platforms where COSATU could constructively engage the government on the issue of environmental change. He contended as follows

I think in terms of the key forums, the stake holder forums where we participated neh...

The first one is called the DERO which is Desired Emission Reduction Outcomes or

something like that. That was like a joint government forum where they had to discuss how they were going to achieve the climate change goals which they have agreed to. It was convened by the department of Environmental Affairs and Energy. We used to participate there (Interview: Khwezi Mabasa).

Mike Levington who is also not from COSATU but sits at NEDLAC contended that during NEDLAC meetings Labour would support the inclusion of nuclear in the energy mix whilst everyone else is against it. He noted that

Yes, so lets us consider for example in the last appearance at NEDLAC one of the big topics of discussion was whether there should be nuclear in the IRP. All right and to be honest with you, both government, business, and communities were against it. Labour was very strongly for it okay...But essentially what we did was that IRP premise in the IRP 2019 there were ten scenarios I think looked at. Four of those scenarios contained nuclear. So, what we did was, we said okay right please tell us what the deviation from the least cost parts okay of these four scenarios with nuclear would be. Okay and the one that had the smallest involvement of nuclear which was nuclear starting in 2027 would have put an additional 400 billion on top of the current tariffs. So, but well we ended up choosing the least cost power to maximise (Interview: Mike Levington).

Levington's observation confirmed Orr's assertion that there was a certain clique within COSATU who were pushing for nuclear energy, with unclear and selfish motives. Whilst this is so, Mulaisi noted that in some of the NEDLAC engagement COSATU stopped a climate change bill that sought to introduce targets for capping emissions on the basis that government did not have a coordinated transition plan, in place. Mulaisi argued

Well this [NEDLAC engagements] is what lets us say necessitated the establishment of the presidential climate change commission. Government was trying to push a climate change bill that talks to this issue of targets and it talks to this issue of capping emissions. But our response was that having a bill of that nature is good but if you only come and you want to cap things without creating plans. Because if you cap emissions, what you are saying is the excess labour will be made redundant and be laid off. So, if you as government do that, we view such bills as punitive to the workers. So, you need to have a

coordinated transition plan so to say that will accompany bills of that nature. So, as you are looking to cap emissions as you are looking to create targets you also have a plan in motion where workers who are then made redundant as a result of that cap are able to ply their trade in other sectors of the economy (Interview: Lebo Mulaisi).

The discussion with the participants around what takes place at NEDLAC shows COSATU lacks an active conscious to identify and to resist the systematic elements of fossil capitalism. NEDLAC is a platform where impactful ecological policy interventions could be happening at a national level. COSATU as a permanent member could be identifying problematic areas and gaps in the environmental policies, then initiate and lead debates as opposed to waiting from Government and business to call NEDLAC meetings.

Theme 12: Fragmented labour movement and environmental issues vs. Trade Union priorities/ political ambitions

The findings of this study show that the fragmentation of the labour movement which culminated with the expulsion of NUMSA from COSATU distracted union leadership from the work around climate change. It was also clear from the participant's responses that there were other issues that distracted the climate change project like funding of the project and different priorities from the affiliates as well as internal squabbles with the affiliates. One participant, Chauke, noted that there was also turmoil which happened in FAWU and after a few years' things that were once priorities like climate justice got lost along the way.

According to some of the participants when NUMSA left COSATU there was a big leadership void since NUMSA was very vocal and instrumental in pushing for renewable energy as an alternative to the use of fossil fuels. Lekalakala noted that NUMSA complimented COSATU's climate change position and its expulsion from COSATU meant that the input and the energy which NUMSA brought to the reference group were lost. Lekalakala and some participants viewed as a blow to the reference group. Lekalakala who is from Earthlife environmental organization sated the following

Like I am saying my disappointment was when NUMSA was not able to attend anymore because the meetings were held at COSATU house and I remember one day when we went to a meeting. Comrade Enos Mbodi from NUMSA was coming to the reference group meeting and that was that time that was leading to NUMSA's expulsion from COSATU. You know that was one arm or one important component that could not be part of discussions (Interview: Makoma Lekalakala).

Some participants alleged that some of the COSATU affiliates such as the NUM and NEHAWU are reluctant to make public statements in full support of the just transition policy. One participant commented on the fact that the policy is there, but it is not being implemented. There is no continuity even though it is a politically correct policy.

According to Fundi Nzimande everyone who was in COSATU driving climate justice left the federation. Jane Barret contended that in order to implement the climate policy document and bring about climate justice "a union machinery inside each affiliate was needed to take the issues forward". Barret contended

...but that is where things kind of fell short because the leadership just was not there. It was focused on other issues; it was focused on bringing Zweli down it was focused on protecting Zuma. It was focused on you know all the factional stuff that was happening at the time" (Interview: Jane Barret).

One of the participants was very candid in discussing what she viewed as unethical behaviour within some affiliates, especially within NEHAWU where certain individuals wanted to shift the policy direction in favour of nuclear deal. Other participants noted that whilst there is a strong desire for unions to protect jobs, sometimes the affiliate's interests are mixed.

The participants pointed out that whilst it was NUM and NUMSA which was against the Independent Power Producers (IPP), at first, but we currently have renewable energy being procured by Independent Power Producers. She pointed out that around 2011 and 2012 NUMSA was even willing to invest some of its own funds in renewable energy. The NUM since around 2011-2012, even now is pro-renewable energy. According to this participant both NUMSA and

NUM called for a publicly owned renewable energy sector. This is somewhat a contradiction because COSATU on the other hand, supports a state owned renewable energy sector whilst it contends that the effects of moving to renewable energy must be minimized in order to mitigate as far as possible the effects of job losses to workers.

In the interview with Melisizwe Tyaisi, Tyaisi contended that both NUMSA and NUM have consistently highlighted that government lacks direction and does not have just transition plan in place and this will therefore put hundreds of thousands of workers if not millions of workers in jeopardy.

In the interview with Liesl Orr, she pointed out that there might be a lukewarm kind of feeling from some COSATU affiliates on “how far they are willing to go, how much of their strategies are towards raising a defense in terms of protecting jobs, how much of that is tilted towards looking at alternatives and looking at the development of new skills set, new industries and so.

According to Louise Naude, the NUM membership base has to hold back against the transition until it is just. Whereas NUMSA can embrace the transition (especially socially owned renewable energy) because socially owned renewable energy holds opportunity for their members. Rudi Dicks contended as follows

It is chalk and cheese and NUM never said, I mean maybe it did, but NUM will never say it will endorse COSATU Climate Change policies, it never says that because it sees itself threatened as a result of COSATU climate change policy because we have not managed these challenges adequately and that is why it unravelled. Because NUM was, by the way NUM and NUMSA was driving the reference group (Interview: Ruddy Dicks).

Baloyi an official of NUM and an official spokesperson on energy and the climate crisis for NUM, during his interview, he clarified the NUMs position in relation to COSATU climate change policy position. He contended that

You see the NUM position is not differing from the COSATU position because COSATU talks about a fair global deal. Where it says do not just punish... [inaudible] no it is not saying that. And it talks about in that document mixed energy. Which means you

must be responsible when you have this; you have a proper mix that will take care of our social problem at the same time taking care of the environment. Which means you cannot be irresponsible; the NUM is not saying use coal and be irresponsible, we are not saying that. That is why we are saying introduce, introduce clean coal products, be responsible when you use coal... We believe in a clean environment, yes, we believe in that and forever it must be done in a just way and that is why we call it a just transition. We must move but we must be responsible in our move. It must find a balance (Interview: Baloyi).

Theme 13a: Defending coal jobs: A paradox between short-term and long-term workers interests

It is also important to note that trade unions are also faced with the challenge of defending coal jobs. This is the case here in South Africa but also in other parts of the world, including the US. Sweeney (2013) notes that the unions in the U.S have a long history of supporting coal jobs as well as other industries which rely on the extraction of other fossil fuels, chiefly, because trade unions have members working in those industries and corporations. These industries include mining, drilling, transportation and also power utilities that generate, store, use and transport those fuels. The U.S government on the other hand supports the ‘pledge and review’ approach to emissions reductions (Sweeney, 2013) the status quo will continue and the world’s poor will bear the brunt.

One of the recurring issue raised by participants in this study also related to the difficult position that the labour movement in South Africa finds itself in, when it comes to the practical implications of the just transition to their membership. The reality is that although new clean jobs may be created, in the process some jobs will be lost yet there is no clear practical plan on how the affected members will be absorbed into the newly created jobs. GSD Chauke from AFADU and Khangela Baloyi from NUM had much to say on this issue. The long excerpt below deal with this contentious issue:

...we know that South Africa about eighty percent of our power is from coal and then main participants in that are NUMSA and NUM. So, they played a role and they defended the position to say look we cannot be seen to be pushed more by the

international call of reducing greenhouse gases whereas in South Africa we do not have the luxury to create power from Hydro for an example. We do not have the luxury to create power from nuclear because it is very expensive to erect. We have got large resources of a large reserve of coal which we can earn from and then also to drive our industrial development. Because we are not yet at the height of our industrial development. So, we need to be hoodwinked by the international community who will come to us and say no, no stop the coal production whilst there is so much advanced. So, we need to make sure that jobs are not lost in the coal mining; jobs are not lost in Eskom in the production of coal power and the like. I said what they did not highlight in the process was nothing to defend the loss of jobs as well as to indicate that it is cheaper for us to produce electricity from coal because we do not import coal (Interview: Chauke).

According to Chauke during the policy formulation discussions the NUM was adamant that it will defend coal jobs as much they could and they will not be dictated upon by the international community, especially since South Africa has large coal reserves, enough to drive industrial development.

This is largely a view that was shared by one or two of the other participants and NUM also came out to defend its position on defending coal jobs. The NUM basically argued that there are lot of people who are depended on coal mining i.e. workers as well as communities around where the mine is situated. In the event that the mine closes, these communities will suffer.

Khangela Baloyi contended that the wind turbines for example, are situated in other regions and provinces, which means there won't be job opportunities for people in Mpumalanga or in Limpopo where KUSILE and MEDUPI power Stations are respectively, situated. Furthermore the jobs in the wind turbines are short term as they involve erecting and maintenance of the wind Turbines. He also pointed out shortcomings in relying on wind and solar to generate power and the limited job opportunities in those sectors. Khangela Baloyi went on to further clarify the NUM position on climate change and contended as follows:

Yes, because when you destroy a job in Mpumalanga, and you create another job in Western Cape. The people that do not have jobs in Mpumalanga that you have destroyed their jobs because of the new project the IPP they are not going to benefit from that IPP?... So, the coal miners mine the coal and send it to the power station, so closing the power station you are indirectly closing the coal might as well. So, our members in coal are going to be affected that is why we are saying we believe that we can have clean coal projects. The new ones are designed to decrease the levels than the old ones. And you can do what they call carbon capture as well. So, there is clean coal technology, and the other very important issue is South African has got abundance of coal. We have a lot of coal; it will be madness for us not to use the coal that we have (Interview: Baloyi).

It is important to mention that the research that was conducted by NUM and NALEDI in coal mining, titled ‘Climate change research study on the coal mining sector in South Africa’, revealed that with the rising and persistent unemployment and underemployment levels as well as a innumerable socio-economic problems in South Africa. Coal mining alone employed 57 700 people in 2006. The study also revealed that more than 90% of South Africa’s electricity comes from coal and many of NUM’s members work in the coal mining industry. The study also acknowledged that the burning of coal is one of the single most significant causes of climate change and global warming and its consequences (Climate change research study on the coal mining sector in South Africa). The study noted that

NUM acknowledges that immediate and urgent action must be taken to not only stop the destruction of the world’s atmosphere but also to reverse and remediate the serious damage that has already happened. Measures must be taken that prevent, reduce and minimize damage to human health and well-being and the environmental. Unless climate change impacts are mitigated and further prevented they will continue to cause environmental damage that threatens the world’s ecology and biodiversity and render life as we know it unsustainable. (‘Climate change research study on the coal mining sector in South Africa’).

The study also reported that

The human and environmental health impacts, which in many cases lasts and accumulate over decades, tend to have greater impacts on poorer communities, where other common factors such as poor nutrition, sanitation and hygiene, domestic coal and wood burning and lack of access to clean drinking water further compound the impacts of the mine and power station pollution. The health costs and costs to the economy and development of people are indeed incalculable and longitudinal studies on impacts and costs thereof are scarce. These costs are not included in the price of coal. These costs are borne by the affected communities. A clear example of coal mining communities in distress is evidenced in Mpumalanga. In the Witbank – Middelburg area informal settlements are located proximate to “burning” coal dumps, and in the Carolina area, communities were unable to access clean drinking water due to acid mine water contamination of the municipal supplies. (‘Climate change research study on the coal mining sector in South Africa’).

It is clear from the study conducted by NUM and NALEDI that coal has a significant impact on climate change, having huge social impact and a huge environmental impact. The study showed that in one of the mines, that among other things workers had

- A strong awareness of occupational health risks and silicosis. Two long-term workers indicated that they had noted deterioration in their health over the more than two decades of employ at the mine.
- An acute awareness of predicted temperature increases and impacts on water, agriculture and human settlements was expressed (‘Climate change research study on the coal mining sector in South Africa’).

The conclusion drawn from the two mines where research was conducted concluded that

Coal is an integral part of South Africa’s past, present and near future but it is critical to effect a transition to renewable energies such they over time they can contribute to base-load energy. Now is the time to start implementing a just transition, which will transform the jobs of today and develop the sustainable, green jobs of tomorrow for the benefit of all South Africans. The research has outlined a host of climate change jobs that can be

implemented now and in the future. The potential exists for the establishment of renewable energy manufacturing hubs ('Climate change research study on the coal mining sector in South Africa').

The said study also condemned the government's plan to invest in a third Power Station. It felt this was going to bring more coal to the surface and more was seen as an obvious detraction to the need for the needed substantial investment in renewable energies and smart grids, in order to limit the climate crisis.

Consequently, The Million Climate Jobs Campaign was endorsed and seen as a necessary campaign to avert building a new Power Station. The study also recognized the need to have progressive government policies across a host of departments to support the development of new industries.

The studies also called for active programmes to skill and train the workforce across the renewables sector. In essence, skills development and training was seen as an integral part of climate change job creation which indeed is pre-empted by the need for renewable energy. Therefore the study saw large-scale development of renewable technologies, combined with ambitious energy efficiency identified in the research, bearing a huge potential for job creation and indeed a viable programme to reduce emissions in South Africa, "while making the country's economy much more resilient in the face of declining demand for coal worldwide" ('Climate change research study on the coal mining sector in South Africa').

The NUM/NALEDI 'Climate change research study on the coal mining sector in South Africa' shows that coal workers were consulted and an extensive research in coal mining was conducted by the climate change reference group in collaboration with the NUM. Importantly, the study shows that in the research conducted, the NUM clearly aligned itself with the COSATU climate change policy commitments. Any deviation by the NUM from the policy will not only undermine the research conducted but it will question the trade union's commitment to the wishes of its constituents, it will also question the NUM's environmental commitment. By not pursuing the just transition, the union will be ignoring the climate science and the evidence that

show that coal is ephemeral, it will soon be a thing of the past and NUM will simply be ignoring the health of its members and the health of communities living closer to the coal mines.

The argument that South Africa has large coal reserves, enough to drive industrial development is neither here nor there. Studies show that Colombia (a third world country with poor communities) is the leading exporter of coal in South America and the fifth biggest exporter in the world and yet in the last five years the dynamics have changed subsequent to measures by Europe in favor of phasing-out coal, in order to reduce the greenhouse gas emissions and to mitigate climate change. Now in Colombia are dealing with post-extractivism politics in order to map out the how the future (without coal dependency) must look like after the transition, how to cope without coal dependency. Catalina Caro Galvis, from CENSAT Agua Viva (Friends of the Earth Colombia) contended “The Colombian state, the company and the multinational consortium have to take their responsibility for the economic future of the communities” (Catalina Caro Galvis, SCRIPT OF THE VIDEO LECTURE).

It must be noted that during the many years of coal dependency, debates centered on ‘extractivism’, which David Harvey calls “accumulation by dispossession”. This is when private transnational companies accumulate millions through violently dispossessing / robbing others. Literature has shown that extractivism has produced huge social, environmental and cultural inequalities, in the poor communities where mining takes place. South African mining communities can attest to this fact, as studies have been conducted in these mining communities.

In Colombia due to the changing dynamics in coal mining, Friends of the Earth Colombia, trade unions, governments, multinational corporations and civil groups are now debating post-extractivist transition’. The concept of a ‘post-extractivist transition’ refers to avoiding the risk of a transition towards renewable energies under neoliberal conditions, as advocated by multinationals and governments. The debates are aimed at avoiding new dependencies associated with renewable energies. Post-extractivist transition’, therefore encourages autonomy and the governability of the territory by local communities. The local communities and affected workers have sovereignty and autonomy to make decisions about policies that will effectively facilitate a just transition.

South African trade unions might be behind in terms of these developments, however, the commitment shown by NUM in the study conducted by NALEDI as well as COSATU's climate change policy commitments, the South African trade unions, particular the NUM should be in their advance stages of discussing post-extractivist transition'.

In Colombia, Catalina Caro Galvis and the community are holding the Colombian state, the mine and the multinational consortium to take responsibility for the economic future of the communities post the transition from coal mining. This is precisely what NUM, COSATU, Environmental organizations and communities, should be doing, post the endorsement of the climate change policy and in pursuit of a just transition.

Sweeney (2013) contends that the availability of extreme energy in North America is changing the political discourse. The fossil fuel companies are now framing the debate and arguing the need for jobs and energy, among other issues. Stevis (2013) on the other hand, talks of labour environmentalism and contends that while most unions in the U.S have been involved in collaborative initiatives with the environmentalists, some industrial unions do not have an environmental policy and others are blatantly hostile and cite the need for jobs and the need for energy security or independence.

The literature in this study therefore shows that countries such as the US have trade unions which blatantly support coal mining as well as other industries that are dependent on coal. Whist this is true, it also is important to note that there are trade unions that have formed collaborative initiatives with the environmentalists.

It is also important to note that according to research released by the Energy Research Centre at the University of Cape Town and the Stockholm Environment Institute in 2019. The study notes that other countries in the world are already moving away from coal (just like in Colombia) and re-skilling workers for other industries. The same could happen here in South Africa.

This study notes that trade unions in many parts of the world have seen the need for embarking in collaborative initiatives with the environmentalists and as Stevis (2013) noted that it is

imperative for trade unions to have environmental policies. An article in the Mail&Guardian reported that trade unions in Germany are moving away from coal, whilst the South African unions have no plans regarding what needs to happen concerning coal yet coal jobs are going extinct. The article reported

In Germany, government, unions and the coal industry have agreed to phase out coal in two decades. In Chile, a similar agreement has been reached. Each one of these plans includes retraining people so they can work in the renewable energy industry, or go into other work. In Canada, workers in one mining town are being helped to set up a facility for legal marijuana production. Other countries are starting to work out what to do with workers who are no longer able to work in coal jobs. South Africa is starting to talk about the problem, but the discussion is happening while jobs are already being lost (Mail&Guardian, No plan as coal jobs go extinct, 18 April 2019).



COSATU marches against Eskom restructuring and possible... Six Eskom power plants affected by labour action

It is my contention therefore that in any fossil driven economy and where there are huge coal reserves, it is natural to have a high numbers of workers employed in those sectors and industries. Likewise unions will fight for the continuation of employment in those industries. However, coal is not finite and therefore those jobs won't last for long. The world is slowly but surely phasing out coal. The climate science is clear. As a result due to many factors associated with climate change, coal being one of them, COSATU has committed to just transition to a low carbon and climate resilient economy and has one of the world's progressive climate change

policies. Whilst defending coal jobs may be top of the agenda for NUM and seem like a noble cause, empirical evidence show the coal industry is shrinking and the coal jobs will soon fade into oblivion.

I therefore contend that Trade unions with members that are affected by climate change must have a forward thinking approach and mitigate the loss of jobs by acting now in pursuit of just transition. Whether or not the NUM and other COSATU affiliated unions have an environmental policy or environmental protection outlook, the COSATU's climate change policy document is a good starting point for South African trade unions to combat fossil capitalism and transit to a low carbon and climate resilient society. The days of COSATU's slogans in support of coal are nearing the end. Coal will soon reach its natural limits. The time to act is now. Exploring new alternatives to coal will prove to be a good investment in the future.

Theme 14: Anti-fossil capitalism (Ecological Marxist approach; Democratic eco-socialism and an active conscious to identify and to resist the systematic elements of fossil capitalism)

The data in this study also revealed that in 2011 COSATU, NACTU and FEDUSA submitted a joint response to the Green Paper on Climate Change. The three federations, which were the only trade union federations in South Africa at the time, contended that

We are convinced that any efforts to address the problems of climate change that does not fundamentally challenge the system of global capitalism is bound not only to fail, but to generate new, larger and more dangerous threats to human beings and our planet. Climate change ... is caused by the global private profit system of capitalism. Tackling greenhouse gas emissions is not just a technical or technological problem. It requires a fundamental economic and social transformation to substantially change current patterns of production and consumption (COSATU climate change policy document).

Noting that contempt for fossil capitalism forms the essence of the COSATU climate change policy document but despite this contempt shown by labour; COSATU has not challenged fossil capitalism, pointblank. More so, since the COSATU, NACTU and FEDUSA's 2011 joint submission contends that if global (fossil) capitalism is not challenged, the climate crisis will be

catastrophic to human beings and the planet. Whilst the assertion by the three trade union federations was so profound and spot on, what is disturbing is the fact that none of the three trade union federations actually did something about the threat to human life and the planet which they not only identified but made a global declaration in response to the Green Paper on Climate Change.

What is also puzzling is why COSATU, NACTU and FEDUSA are doing nothing about greenhouse gas emissions in the country since they are aware that tackling this problem requires a fundamental economic and social transformation to substantially change current patterns of production and consumption.

The inaction from COSATU, NACTU and FEDUSA means the status quo remains. This means no fundamental economic and social transformation will take place and the current patterns of production and consumption remains. This is exactly what market liberals and institutionalists would expect, as they concede that climate change is caused by fossil fuels driven growth paradigm but hold that harm to nature is only temporary because economic growth will revive the damage caused to nature in the long run. However, they fail to explain how fossil fuels, which took millions of years to form as well as ecosystems which also took hundreds and thousands, if not millions of years to form, will be restored.

The truth is that fossil fuels are a non- renewable sources of energy and cannot be replaced once depleted. The damage to the ozone layer, the damage to the ecosystems and loss to the lives of animals and humans due to climate change and global warming is indefinite.

All participants had their own understanding of what just transition must entail and what COSATUs position was. Chauke confessed that as COSATU they have failed to make enough noise to direct the ANC led pro-capitalist government and to remind the ANC led pro-capitalist government about what the fight for liberation meant to ordinary South Africans.

Chauke claimed that COSATU is two faced. In theory COSATU is pro-socialist economy and that is how it presents itself yet in practice it only displays capitalist tendencies. Chauke claimed

that personally he supports eco-socialism “because they do not want to leave an unoccupied space for green capitalists.

Liesl Orr on the other hand contended that even though the COSATU policy explicitly talk about moving away from coal and also talks about the just transition, COSATU may be between a rock and a hard place because among its affiliates there are those who fully support the just transition and moving away from coal while some affiliates support nuclear energy. The COSATU policy therefore focuses on the common ground on the just transition. Mulaisi contended that renewable energy must remain in the ownership of the state and to be equitably distributed to the workers, to the poor and the working class. Mulaisi added that whilst COSATU has rejects green capitalism especially through the IPP program

There is no reason why we should; replace one form of capitalism with another... The state has a significant role to play, workers yes, we do but the significant share of it will lie in the ownership of the state because it is the state’s responsibility to make sure that they generate energy, distribute it equitably especially to those who necessarily afford high energy costs. So that remains the role of the state but yes there is still room for worker control (Interview: Lebo Mulaisi).

According to Jane Barret, a just transition meant to be transitioning to a system that respects nature where consumerism is not good. She argued that just transition challenges the very basis of capitalism

...that the notion that growth is about increasing Gross Domestic Product and you have to continue producing and producing goods. But rather looking at a growing economy as one that services the people and where production is for use. It is not just for the sake of generating profits. And so, the discussion was very much an attempt to try and take the argument for a just transition to another level not that a just transition in a capitalist framework. (Interview: Jane Barret).

Mike Levington mentioned that in Germany they have socially owned renewable energies which might be a viable option for South Africa. This is similar to what NUMSA advocates. Levington explained as follows:

Okay you want to have, in Germany okay you have these projects where they will take one turbine out of the number of turbines that they build. And then what they will do is, they will make the local community the owner of the turbine. Okay, it is your turbine; you can go and look at it okay and you get dividends okay twice a year from that turbine operating. Okay and there is, remember we are twenty years behind the rest of the world on this transition (Interview: Mike Levington).

In this study it was established that fossil capitalism is the cause of the global ecological crisis where markets and the states (governments) are central to capitalist accumulation. Consequently, any critique on the ecological crisis has to start with a thorough analysis of markets, their relationship with workers and role played by them. It must be noted that the trade unions are better placed to arrest fossil capitalism because without workers, there is no products and services to sell. Markets become non-operational and collapse. I therefore contend that if the trade unions were not fixated economic and political unionism, trade unions could collapse the capitalist logic. A call for a regime change therefore must bring a regime that will be concerned for both humans and the environment.

Pillay (2020) contends that fossil fuel capitalism takes the labour movement to into the realm of democratic eco-socialist working class politics and to the building of red/green coalitions. It should be noted that a number of participants' responses in this study support democratic eco-socialism.

Chauke openly stated that he was for eco-socialism, whilst Mulaisi conceded that COSATU's position supports eco-socialism after seeking an explanation of what eco-socialism entails. It is also important to emphasize that the COSATU website has posted an article by Ian Angus, titled "*Confronting the Climate Change Crisis, An Ecosocialist Perspective*", presumably for educational purposes but one can draw a strong inference that COSATU has aligned itself with eco-socialism in theory but has not taken an ideological stance publicly.

Pillay (2020) contends that

A democratic eco-socialist working class politics recognizes the social and natural limits to fossil-fuel GDP growth pathways, and the need to forge a new form of counter-hegemonic politics, based on red-green alliances. This is a major challenge to trade unions, rooted as they are in defensive bargaining relationships with employers, and/or relations of patronage with political parties and the state.

Lastly in the literature review chapter I noted that Sweeney and Treat (2018) contend that the ‘just transition’ will require a societal shift of revolutionary proportions. And Lowy (2018) notes

The struggle for green socialism in the long term requires fighting for concrete and urgent reforms in the near term. Without illusions about the prospects for a “clean capitalism,” the movement for deep change must try to reduce the risks to people and planet, while buying time to build support for a more fundamental shift. In particular, the battle to force the powers that be to drastically reduce greenhouse gas emissions remains a key front, along with local efforts to shift toward agro ecological methods, cooperative solar energy, and community management of resources. Such concrete, immediate struggles are important in and of themselves because partial victories are vital for combating environmental deterioration and despair about the future. For the longer term, these campaigns can help raise ecological and socialist consciousness and promote activism from below. Both awareness and self-organization are decisive preconditions and foundations for radically transforming the world system. The synthesis of thousands of local and partial efforts into an overarching systemic global movement forges the path to a Great Transition: a new society and mode of life.

It is critical for COSATU to note and to educate workers. Martinez-Alier and Schlupmann (1987) noted that

The irreversible destruction of fossil fuel is proceeding at a rapid pace. A heightened greenhouse effect is possibly been felt already, even though most people in the world have a consumption of exosomatic energy more typical of the period before the Industrial Revolution than of advanced capitalism. The thinning of the ozone layer is taking place at an even faster pace. The European colonization of America (and other overseas

territories) became an environmental disaster. (Martinez-Alier and Schlupmann, 1987, p.xv).

The above extract from Martinez-Alier and Schlupmann shows that already in the 1980s (one can also go as far as the 1960s) science and scholars were already pointing to the signs that showed the planet is nearing its end due to the ecological crisis caused by fossil capitalism. Thus, in looking for alternatives and solution to the climate crisis, there are a growing number of scholars and activists who are advocating for a democratic socialism which is ‘eco-centrally’ orientated and different from the failed socialism (of the Soviet Union and China). According to Amandla Issue 61/62, dated 8 February 2019 and published in the COSATU website noted that this new kind of socialism is known as eco-socialism and its fundamental objective is to restore the relationship between human and nature.

This study in answering the Research Question also explores the extent to which COSATU and its affiliated trade unions pursue Social Union Movement unionism (which could easily link with eco-unionism and eco-socialism), particularly, since the Federation had adopted a leftist posture from its formation and also considering that in 2009 the Federation also adopted a very progressive Climate Change Policy Framework and outlook, which formed the basis for this study.

Literature has shown that there are two main approaches to just transition namely, a reformist approach and a regime change. Since COSATU has identified capitalism as the root cause of the climate crisis pursuing a regime change will make sense. Particularly, considering that under capitalism everything including human labor and nature is turned into a commodity (Polanyi, 1957, p. unknown). Noting that Social greens on the other hand calls for reforms to reduce inequality and foster environmental justice” (Martinez-Alier and Schlupmann, 1987, p.227). I contend that calling for reform within the current economic mode is akin to putting regulations in place which will still be managed and manipulated by fossil capitalist. Whilst reforms are a good thing they only provide a temporary measure yet a regime change into democratic eco-socialism will have permanent, meaningful and positive results for humans and for the environment

According to Polanyi (1957), Burstein (1976) and Foster and Clark (2016) commodification, overproduction and the endless pursuit of profit are key features of capitalism. Usually, workers would have no problem with any of these notions because commodification, overproduction and the endless pursuit of profit mean employment opportunities, job security and overtime. However, in the literature review chapter I strongly contended that overproduction of goods and services is one of the systematic elements of capitalism which has made humans to become habitual consumers. Hence Burstein (1976) contends that ‘overproduction’ is the basic feature of capitalist crisis whilst Foster and Clark (2016) contend that capitalist are on a path of narrow pursuit of profit. Now in order to overcome these deeply entrenched systematic elements of capitalism within societies, globally and also locally, what is needed is ‘a societal shift of revolutionary proportions’ (borrowing for Sweeney and Treat’s words).

I contend that a number of scholars, writers, climate and environmental activist use the terms: capitalist exploitation and abuse; unwarranted use of fossil fuels generated energy; ecological exploitation and abuse; ecological degradation; profit accumulation; private ownership; cheap labour; fossil fuel depletion, domination; the markets and the invisible hand; technological advancement to describe capitalist greed and capitalist's use of fossil fuels which have a devastating effect on the environment and the planet. In this study the terms are grouped together and referred to as systematic elements of capitalism and they depict the exploitation and abuse of nature and humans by fossil capitalism.

It is therefore safe to conclude that the ecological crisis is a direct result of the systematic elements of capitalism i.e. private ownership, an appetite for profit, competitive markets, domination, fast production, technological advancement, exploitation of wage labor and exploitation of the environment, generating energy from fossil fuels, degradation of the environment, air pollution, disease, job losses and poverty ridden communities etc. It is interesting to note that principle 1 of the COSATU climate policy document speaks to this core systematic element of capitalism which is detrimental to both humans and nature. I therefore contend that an active consciousness to identify and to resist the systematic elements of capitalism will in the long run defeat the capitalist logic and reduce the metabolic rift that exist between nature and humans. COSATU was able to identify the systematic elements of capitalism

but by being complacent with the capitalism, COSATU has failed to resist the systematic elements of capitalism.

Consequently, in this study, when assessing COSATU's methods through which COSATU policy to pursue the 'just transition' was developed, I looked at whether COSATU and its affiliates have an active consciousness to identify and to resist the systematic elements of capitalism in their environmental policies, in their posture and tenacity. I therefore conclude that a call for regime change and education on the dangers of fossil capitalism will create an anti-capitalist attitude that will assist workers to a conscious to identify and to resist the systematic elements of capitalism.

Molyneux (2010) contends that "if capitalist corporations and the state are the main polluters what is needed is a social force that is more powerful than these corporations and states" (Molyneux, 2010, blog). He therefore identifies the international working class as that powerful force because all over the world capitalist depend on workers. He contends that "without workers' labour the whole system seizes up, its factories, call centers, i plane, trains, lorries and shops, all grind a halt" (Molyneux, 2010, blog).

In essence Molyneux contends that fossil capitalism is somehow dependent on the exploitation of workers across the globe and workers across the world can turn this to their advantage. Thus, the rallying cries in The Communist Manifesto "workers of the world must unite" (Marx and Engels, 1848). This call is still relevant in today's fast moving work environment. Similarly, here in South Africa COSATU and its affiliates must develop active consciousness to identify and to resist the systematic elements of capitalism and will soon have local and international corporations (operating in South Africa) listening to labour, not the other way round.

Consequently, the findings in this study appeals to a far call against environmental racism and call upon the poor of the world (the workers; farmers and the communities which are affected by drought, disease, food shortages, air pollution, deforestation, the middle class) and the organizations that represent them (the climate and environmental activist, trade unions; civil

groups as well progressive governments) to develop a consciousness that will enable them to recognize the systematic elements of capitalism and to resist them.

According to Caffentizis (2013) “Marx wrote that workers would eventually become so accustomed to the rhythms and the flows of capitalist life that they would come to consider them equivalent to forces of nature”. In line with Caffentizis’ contention, people have become so accustomed to the systematic elements of capitalism, to the extent that they have come to consider them as normal life yet these are the very systematic elements that capitalist employ in their narrow pursuit of profit.

I contend that developing such a consciousness is necessary to build an attitude of resistance and an anti-ecological destruction attitude similar to Greta Thunberg’s stance of sailing to New York City from Sweden on a zero emissions sailboat to address the UN on the devastating effects of climate change, at the age of 16 years. Capitalism will be rendered powerless and ineffective.

Greta Thunberg’s stance of sailing across seas in a sailboat that does not emit carbon, sends a clear message that there are alternatives to fossil fuel driven economy. Greta had identified one of the core systematic elements of capitalism, namely, 'the unwarranted use fossil fuel generated energy' and its associated harm to the environment. Greta used this awareness to raise a global awareness around the danger of carbon emissions.

Similar to Greta awareness raising was Michael Jackson in 2010 and Dicky Lil in 2019 both artist raised awareness on the ecological crisis through song. The respective lyrics and official video of the Earth Song by Michael Jackson and Earth by Dick Lil raises awareness of the ecological crisis and the dangers of fossil capitalism. I contend that these artists, like Greta Thunberg had built a consciousness to identify the systematic elements of fossil capitalism and through song are raising an awareness that will to help people to identify and to resist the systematic elements of fossil capitalism. This proves that there are numerous ways to raise a consciousness to identify and to resist the systematic elements of fossil capitalism. It could be in a form of resistance, art, music, poetry, workshops and seminar, education, public debates, social dialogue, academia, civil society and so forth.

Eco-Marxists contend that fossil capitalism has necessitated the need to overhaul the capitalist system in order to protect the environment and those exploited by the system and in the capitalist system humans are continuously alienated from nature by the capitalist mode of production, which recognizes nature as something separate to man which exist as a substructure to the economy. Yet in the Marx ecology before the advent of capitalism and globalization there was social metabolism.

KEY FINDINGS

Therefore, the following are my key findings in the study.

- The COSATU's 2009 Congress took a resolution to pursue a just transition towards a low carbon and a climate resilient society and mandated NALEDI to conduct research and come up with a Climate Change Policy framework.
- The just transition towards a low carbon and a climate resilient society was greatly influenced by ITUC, directly and by ITF (via SATAWU) who started conducting research on CO2 emissions in the 2000s.
- A Climate Crisis Reference group was formed which developed a Climate Change Policy framework that was endorsed by the COSATU Central Committee in 2011.
- The reference group consisted of trade union officials, shop stewards, environmental organizations and academics.
- From the Climate Change Policy framework a climate change policy document was developed and adopted in the 2012 Congress.
- Issues were robustly debated in reference group meetings; members of the reference group attended seminars on the climate crisis; 3 research reports in Mining, Poultry and chemicals were finalized; capacity building and information sharing workshops were held with shop stewards where subject experts did presentations and where the content of the policy document was endorsed.
- In developing the climate change policy document COSATU followed the International Labour Organization (ILO) guidelines which are designed at helping trade unions to

formulate policies. COSATU undoubtedly produced a brilliant climate change policy document.

- COSATU position supports a deep transformative change in theory (climate change policy document) but in practice it promotes a narrow reformist transformation and little or no action has been taken to further advance the policy commitments.
- The COSATU climate change policy document adopted 15 principles that profess to tackle the climate crisis in South Africa and also calls for regional solidarity.
- COSATU has not taken a lead role in any of the initiatives advanced in the policy document.
- COSATU had taken a top to bottom policy approach yet an alternative to capitalism and the transition to a just transition towards a low carbon and a climate resilient society have to be built from the bottom up, in a process of democratic participation led by the labour movement.
- Workers were only consulted where in-depth research was done in the Poultry, Chemicals and Mining sectors after the policy framework was endorsed by CEC in 2011 and after the Climate Change Policy was adopted in the 2012 COSATU National Congress.
- COSATU website has posted an article by Ian Angus, titled “Confronting the Climate Change Crisis, An Ecosocialist Perspective” yet eco-socialism remains a utopian project within COSATU and it has never been pursued.
- COSATU adopted 15 policy principles in its climate change policy document. These principles are mainly COSATU ecological commitment to fighting fossil capitalism and to pursuing a just transition to a low carbon and climate resilient economy. These principles have not been vigorously pursued by COSATU and its affiliates.
- COSATU currently supports the accumulative imperative.
- COSATU has adopted a minimalist approach to just transition.
- Apart from the policy document, research in 3 sectors and few workshops conducted by the NALEDI reference group COSATU has not given any support to affiliate in terms of just transition initiative and implementation of the 15 policy principles.
- The COSATU affiliates do not have the capacity to deal with climate change.
- The affiliate leaders not educated on climate change.

- COSATU supports coal jobs.
- COSATU is still engaged in extractivist politics yet the world is busy phasing out coal.
- Some affiliates within COSATU are in favor of Nuclear energy.
- Some affiliates within COSATU were in favor socially owned renewable energies yet COSATU supports state owned renewable energies.
- COSATU needs to develop an anti-capitalist attitude.
- COSATU needs to become an eco-socialist trade union federation and lead workers to a future without the exploitation of nature and labour, thereby restoring the social metabolism between nature and mankind.
- COSATU needs to prioritise climate justice.
- The article by Ian Angus, titled “Confronting the Climate Change Crisis, An Ecosocialist Perspective” and the COSATU climate change policy document sets a good and solid foundation to pursue a just transition towards a low carbon and a climate resilient society but it will take more than one or two articles to educate workers about democratic eco-socialism.
- Although COSATU sits at NEDLAC it has not taken the opportunity to advance any of the principles in its policy document due to its stance to defend jobs, including those in carbon intensive industries.
- COSATU seems oblivious to the metabolic rift that widens even further as a result of inaction.
- The capitalist destruction of nature serves to alienate man even future to nature.
- By supporting a capitalist led government COSATU indirectly supports the accumulative paradigm.

CONCLUSION CHAPTER

The study shows that COSATU took a landmark resolution against climate change in 2009 and resolved to pursue a just transition to a low carbon and climate resilient economy. COSATU then mandated its research wing NALEDI to commission research and come up with a policy framework. The resolution contended that it recognizes that the developed countries were mainly responsible for climate change and identified capitalism as the root cause for climate change.

COSATU resolution also contended that

From a development perspective the resolutions support the transition to a low carbon economy through changing unsustainable production and consumption patterns in which government investment to create new green jobs in a number of sectors is vital (COSATU 2009 resolution on climate change).

NALEDI formed a climate change reference group which drafted a policy framework. In its policy framework NALEDI came up with 15 principles, one of which categorically stated that fossil capitalism as the cause of climate change. The COSATU Climate Change Policy Framework was endorsed by the COSATU Central Committee in 2011 and a Climate Change policy document was developed and adopted at the 2012 COSATU National Congress.

The empirical data obtained in this study revealed that while COSATU has one of the most progressive environmental policy in the world, COSATU has been complacent when it comes to coal mining and most forms of fossil capitalism, including Environmental Racism. Whilst COSATU's climate change policy does not literally say coal production must end. The policy unequivocally talks about a transition away from fossil fuels to a low carbon society and the studies conducted by NALEDI in collaboration with NUM reveal that coal has a significant impact on climate change, having huge social impact and a huge environmental impact. NUM also acknowledges that immediate and urgent action must be taken to not only stop the destruction of the world's atmosphere and also acknowledged the need redress the damage that has already taken place. Instead of doing this NUM and COSATU have taken a different stance mainly due to protecting coal jobs. The NUM in particular seemed to be inundated with

extractivist politics despite evidence that show that coal is being phased out in many parts of the word.

COSATU on the other hand seems to have missed opportunities especially at NEDLAC to influence and change National Policy in pursuit of a just transition. COSATU has also failed to capacitate and to give support to its affiliates to pursue the just transition. This is despite the fact that the COSATU Climate Change Policy document warns against the dangers of not taking action.

The study shows that COSATU has adopted a minimalist approach to just transition and this could be attributed to its political unionism stance. Yet, in theory it is aligned to eco-socialism, COSATU supports a capitalist government and does not challenge fossil capitalism head on. Most if not all COSATU affiliates don't have environmental policies. While COSATU claim to reject green economy it is not using the space and the platform is has to find alternatives and sustainable jobs for those workers in carbon intensive jobs. Instead it supports carbon intensive jobs while condemning the government that it does not have a clear plan for the just transition, thus it stopped the bill that was to introduce tax for carbon emissions.

In my view COSATU has not developed a consciousness amongst the workers to identify and to resist the systematic elements of capitalism, across all affiliates. COSATU does not an anti-capitalist attitude. COSATU's methods have neglected to educate workers on the dangers of fossil capitalism; the need for a regime change as encapsulated in the article by Ian Angus, titled "Confronting the Climate Change Crisis, An Ecosocialist Perspective" posted in the COSATU website. The transition to eco-socialism remains a utopian project within COSATU. Yet eco-socialism will facilitate a just transition to a low carbon and climate resilient economy.

In my view COSATU needs a monthly bulletin on the impact of climate change and the just transition initiatives as well as progress report on the just transition project. This idea was suggested by SATAWU in one of the reference group meetings. COSATU also needs to adopt the just transition campaign as a short to medium to long term and unending project.

This might help to curb the metabolic rift between nature and humans. end the exploitation of workers and the exploitation of nature COSATU is better placed to lead the revolution for a carbon free planet.

When exploring eco-socialism it is important to acknowledge that Eco-Marxism is one of the variants of Eco-Socialism and to acknowledge that Marxism has many facets. This study combined the features of Eco-Marxism with Eco-Socialism as well elements of radical social unionism; climate justice activism and eco-unionism as its theoretical framework and when evaluating the methods through which the COSATU policy document was developed through assessing the role of South African trade unions in advancing the just transition to a low carbon and climate resilient economy.

According to Kovel noted that capitalist growth only benefits capital and is not ‘real’ human need (Amandla Issue 61/62, 8 February 2019). Kovel contended that capitalism has a feature is that is different from other modes of production in that

It is organised about the production of capital itself, a purely abstract, numerical entity with no internal limit. Hence it drags the material world, which definitely has limits, along on its mad quest for value and surplus value and can do nothing else (Amandla Issue 61/62, 8 February 2019).

As a departing note it is important to highlight that much of the above was well encapsulated by COSATU’s own Lebo Mulaisi when she was describing the character of fossil capitalism. She contended that

I have met the people who developed the policy document. So, these people were quite thorough in what they pointed out and it is a direct consequence of capitalism. So, I mean if we look at how the model of capitalism works it is a model of profit maximization at all costs. So, if you to mine as deep as possible into the surface to get what you need to make your board members happy. The capitalist model has no problem in doing that, so the very nature of accumulation is destructive, it is destructive to the environment; it is destructive sometimes to works, workers’ needs, workers’ health. So, it

is very much a direct cause of how the model of capital accumulation has been allowed to run amok over the years (Interview: Lebo Mulaisi).

The study therefore concludes that if COSATU was for regime change and in favor of a minimalist reform. This would require an ecological revolution. A democratic eco-socialism might be a viable option for the planet's survival. Since evidence has shown that capitalism exists only for capitalism. The first principle in COSATU climate change document calls for a regime change. Therefore, though a deep transition, a low carbon and climate resilient society in line with COSATU 2009 resolution may be realized. When a just transition is realized a social metabolism between nature and humans will be restored. However, if COSATU decides to continue pursuing the minimalist reform path the metabolic rift will gradually increase to unprecedented levels.

Noting that previously a social metabolism existed between nature and men, in order to restore that harmony, Eco-Marxists contend an overhaul of the capitalist system in order to protect the environment and those exploited by the system is needed because under the current economic system humans are continuously alienated from nature by the capitalist mode of production, which recognizes nature as something separate to man and only exists as a substructure to the economy. Lastly, it is important to highlight that Marx ecology best foregrounds for studying environmental degradation, by fossil capitalism. This would therefore be a good starting point for COSATU.

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LIST OF KEY INFORMANTS

Jacklyn Cock

Jane Barret

Rudi Dicks

Louise Naude

Kwezi Mabasa

Howard Mbana

Fundi Nzimande

Alfred Mafuleka

Mike Levington

Liesl Orr

Chauke

Baloyi

Hameda Deeat

Melisize Tyaisi

Babsy Nhlapo

Lebo Mulaisi Mulaisi

Makoma Lekalakala Lekalakala

