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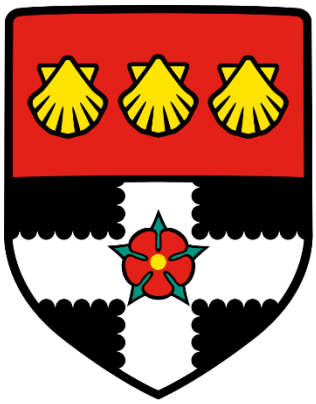

A Political Economy Critique of REDD+: A Case of Zambia

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Declaration of original authorship

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

Brian Chirambo

Abstract

This research is a critique of the incentive-based global mechanism for addressing drivers of deforestation and forest degradation known as REDD+. Most important is the question of whether the incentive based mechanism can actually effectively reduce deforestation and forest degradation in a country like Zambia. Using content analysis of documents and expert interview scripts, the study makes three important findings. Firstly, the study finds that despite demand for energy being the main driver of forest cover loss in most developing countries of Africa, the focus and nature of the suggested interventions are targeted more on addressing agriculture while paying little attention to the bigger problem which is, energy. Secondly the study finds that the suggested incentives in REDD+ will fail to make a standing tree more valuable than a felled one, as it is expected, and consequently fail to motivate forest dependent communities to move away from the trees and pursue other forms of livelihoods. Thirdly the study finds that REDD+ was being supported by developed states because it was perceived cheap and was accepted by developing countries because of its financial promise to them. The study argues that unless REDD+ there is a rethink in the way drivers are classified and strategies are developed and targeted, and unless actors in REDD+ are fully motivated by precautionary and normative principles, the REDD+ mechanism will most likely fail to achieve its central objective of reducing emissions from forests in developing countries.

Conference Papers

i. **STEPS Conference held at the** Institute of Development Studies, Surrey University of the United Kingdom 7 – 9 September 2015

Session Theme: ***Resource Politics***

Paper Presented: W*hat should REDD+ be about? Forest governance incentives or incentives and energy investment?* Resource Politics 2015 https://resourcepolitics2015.com/

ii. **Development Studies Association (DSA) 2016 conference held at the University of Oxford United Kingdom:** 12th to 14th September 2016:

Session Theme: ***Politics in Development***

1st Paper Presented: *"Energy": the underplayed driver of deforestation under REDD+ in Sub-Saharan Africa*
http://www.nomadit.co.uk/dsa/dsa2016/panels.php5?PanelID=4557

2nd Paper: Chirambo and Okereke (2016) The international politics of low carbon development http://www.nomadit.co.uk/dsa/dsa2016/panels.php5?PanelID=4557

Dedication

I wish to dedicate this piece of work to my family: My wife Taukani Chirambo, my Sons Josiah, Nathan and Ethan Chirambo and my daughter Bryana Taukani Chirambo for the support and joy that they have brought into my life. My late dad, who passed on during the time I was doing this study. I know you are proud of me wherever you are. I only wish you were here to celebrate with me. I will Love you always dad.

Acknowledgment

I take this opportunity to acknowledge the efforts and support that the following people gave me during my stay and study at the University of Reading:

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To all, I say thank you very much and may the good Lord richly reward you for your support.

Table of Contents

Acronyms

1. CSO----------Civil Society Organisation
2. COP----------Conference of Parties
3. DfID----------Department of International Development
4. ERB ----------Energy Regulation Board
5. FAO ----------Food and Agriculture Organisation
6. FCPF ---------- Forest Carbon Partnership Facility
7. FD----------Forestry Department
8. GHG----------Greenhouse Gas
9. GRZ ----------Government of the Republic of Zambia
10. IPCC---------- Intergovernmental Panel on Climate Change
11. ILUA----------Integrated Land Use Assessment
12. JFM----------Joint Forest Management
13. NGO----------Non-Governmental Organisation
14. PES----------Payment for Ecosystem Services
15. RBA----------Result Based Activities
16. RED----------Reducing Emissions from Deforestation
17. REDD+---------Reducing Emissions from Deforestation and Forest Degradation + conservation and enhancement of forest carbon stock and sustainable forest management
18. UNEP----------United Nations Environment Programme
19. UNDP---------- United Nations Development Programme
20. UNFCCC ------United Nations Framework Convention on Climate Change
21. UK----------United Kingdom
22. USAID----------United States Aid
23. ZESCO----------Zambia Electricity Supply Cooperation
24. Rep/Academia---Respondent interviewed from Academia
25. GRZ/rep/FD------Respondent interviewed from the Forestry Department of Zambia
26. GRZ/rep/Ag------Respondent interviewed from the Forestry Department of Agriculture
27. ZESCO/rep-------Respondent interviewed from Zambia Electricity & Supply Cooperation
28. REDD/ Consultant-----Respondent interviewed who is a REDD+ consultant in Zambia

List of Tables

List of Figures

1 CHAPTER ONE: INTRODUCTION

1.1 Background

1.1.1 The REDD+ Mechanism

Deforestation and forest degradation, mainly from tropical developing countries are said to be contributing about 17-20 percent to the total global Greenhouse Gas (GHG) emissions (Parker *et al.,* 2009; Bluffstone, Robinson and Guthiga, 2013; Norman *et al.*, 2013). In response, a programme aimed to reduce emissions from deforestation (RED) was suggested in 2007 (Parker *et al.*, 2009; Flaming and Stanley, 2010; Pistorious *et al.*, 2010; Allen and Clouth, 2012; Willem *et al.*, 2013).

From its establishment, RED has evolved from focussing on addressing deforestation to include dealing with drivers of forest degradation, enhancing sustainable development and promoting conservation (REDD+). A series of decisions have been made at various international Conference of Parties (COP) of the UNFCCC providing methodological guidelines and conditions for an internationally accepted REDD+ programme (UNFCCC, 2014; Turnhout *et al.,* 2016). Among key decisions that REDD+ has made has been on the roles of actors in making the mechanism work. For example, developed countries have been given the responsibility of providing financial and technical assistance to developing countries that are a party to the programme to assist them to prepare for the out-scaling of the programme. Developing countries, on the other hand, are the implementers and are expected to localize REDD+ in line with the internationally negotiated guidelines and standards.

Today, REDD+ is part of the Paris accord on Climate Change which was agreed at the 2015 UNFCCC conference of parties held in Paris France (UNFCCC, 2015a; Rakatama *et al.*, 2016). The REDD+ mechanism is therefore promoted on a claim that reducing emissions from avoided deforestation and forest degradation in tropical developing countries was the most cost-effective way available for mitigating climate change (Angelsen *et al.,* 2012) compared to addressing energy and transport led emissions. It is anchored on the concept that providing incentives to developing countries to reward good forest management practices, will motivate them to fight deforestation and forest

degradation and subsequently reduce GHG emissions. It is hoped that the incentive will increase the value of standing trees compared to the felled one. It is expected that poor forest communities who depend on trees for their daily living will benefit financially and shift to other forms of livelihood and support conservation and protection of the forests (Strassburg *et al.*, 2009).

However, the REDD+ mechanism faces several challenges and uncertainties that it must clear for it to succeed (Angelsen *et al.*, 2012, 2013). Some of these include: inadequacy and uncertainties in financial flow; complexity in identifying real drivers of deforestation and forest degradation, lack of capacity in implementing countries; problems of handling emission leakage; making sure that safeguards are in place to protect the rights of indigenous people; developing of equitable benefit sharing frameworks; lack of political will to push for necessary policy reforms and lack of technology and equipment in most participating countries (Angelsen *et al.*, 2012; Accra Caucus, 2013; Atela, 2013; Caravani *et al.*, 2013; Herold *et al.*, 2014; Aurenhammer, 2015; Kalaba, 2016).

The question that this research is therefore asking is: to what extent can an incentive-based REDD+ mechanism deliver on its central objective of reducing greenhouse gas emissions from forests and be able to promote sustainable development for the implementing countries like Zambia?

1.1.2 The UN-REDD+ and FCPF

In responding to the globally negotiated ideas on REDD+, a need to pilot the programme and draw lessons to inform further negotiations as well as out-scaling of the policy arose in 2008 (José and Rica, 2015; Policy and Meeting, 2015). Two international programmes were created. First is the United Nations collaborative programme called UN-REDD+ and, second is the World Bank-led, Forest Carbon Partnership Facility (FCPF)(Parker *et al.*, 2009; UN-REDD Programme, 2010, 2015; Thompson, Baruah and Carr, 2011a; Watson *et al.*, 2013). The objective of these two programmes was to help tropical developing countries get ready to participate in the global REDD+ mechanism (Parker *et al.*, 2009) on reducing emissions from forests.

A three-phased approach was designed as a global process for countries implementing REDD+ to follow. Phase one is the development of the national REDD+ strategy in

readiness for global participation; phase two is the trial stage in which the country begins to implement its strategy or action plan; phase three is the national out-scaling stage that involves participating in the international carbon trading by the implementing country (UN-REDD Programme 2010).

The preparation phase was designed to prepare the countries to be ready to participate in the global carbon market through trade of stored forest carbon. It is further expected that during this phase, participating countries will link REDD+ with existing national forest management policies and sustainable development programmes. The process, therefore, demands national policy and institutional reforms, developing of national monitoring review and verification mechanism (MRV), developing a sharing mechanisms for carbon credits and implementing safeguards to ensure that rights of indigenous people and local communities are protected (Chhatre *et al.*, 2012; AIPP, 2014; UNFCCC, 2014; Cadman *et al.*, 2016). Developing countries participating in REDD+ are therefore expected to produce a national REDD+ strategy that covers all these areas and detailing how REDD+ will be governed and implemented in their country.

Various local and international actors, therefore, play different roles in the process of developing national REDD+ strategies. For UN-REDD+, three UN bodies (FAO, UNEP, and UNDP) collaborate to provide technical and financial support to national actors in the development of national REDD+ strategies. Other international actors include bilateral and multilateral agencies also providing financial and technical support as well as financing research needed to inform the strategy process and content. Local actors include government departments, local civil society organizations, local community representatives and academia and consultants. These actors are brought together to participate in the process of designing national REDD+ strategies as important stakeholders.

1.1.3 Zambia and the UN-REDD+

Zambia was selected among the first nine (9) countries to pilot REDD+ under the support of UN-REDD+ in 2009 (Fumpa-Makano, 2011) owing to its higher rates of deforestation and forest degradation. The country has just finished its 1st phase and has now developed its REDD+ national strategy in readiness for trial activities (Attafuah, Kasaro, and Fox,

2014; Ministry of Environment Sweden, 2014; FCPF, 2015). Like Tanzania and the Democratic Republic of Congo who have gone on to develop their national strategies focussing on forest governance, Zambia's strategy has also placed its emphasis on strengthening forest governance and inclusion of local people in the conservation and benefit sharing coming from such interventions (Duguma, et al. 2014; Rantala & Di Gregorio 2014; Newton et al. 2015a).

However, like many other developing countries, Zambia has complex social economic and political problems that were driving forest cover loss. Some of these include poverty, low access to clean and reliable energy and, generally poor governance of forests (Vinya *et al.*, 2011; Tembo, Mulenga and Sitko, 2015; Kalaba, 2016).

On energy, for example, over 90 per cent of Zambia's rural communities were still using wood energy for cooking and heating (Buckley, 2010). In addition, the country has been experiencing serious erratic supply of clean energy in cities and towns largely due to increased demand for hydro energy but with the static production and supply capacity (Haselip, Desgain, and Mackenzie, 2015; Shane *et al.*, 2016). The repercussion of this situation is that humans whether poor or rich have turned to charcoal and wood fuel as a direct energy substitute to meet their cooking and heating demands (Vinya *et al.*, 2011; Tembo, Mulenga and Sitko, 2015; Kalaba, 2016).

The other key driver of deforestation and forest degradation in Zambia is agriculture (Vinya *et al.*, 2011; Tembo, Mulenga and Sitko, 2015; Kalaba, 2016). However, the Zambia vision 2030, places emphasis on diversifying the economy from dependency on copper to agriculture a move that further puts pressure on forest land. The agriculture sector has for a long period been driven by a politically designed incentive structure that provides farming inputs in form of seed and fertilizer to subsistence farmers with a push for increased crop production. Various studies have implicated subsistence or traditional forms of agriculture as being a major contributor to agriculture-driven deforestation in the country.

It goes without saying therefore that for any intervention to succeed in addressing deforestation and forest degradation; it must provide realistic but radical interventions to address energy and agriculture-driven deforestation and forest degradation.

1.2 Research Objectives

1.2.1 Main Objective

The main objective of this study is to understand whether an incentive-based REDD+ would be able to deliver on its central objective of reducing greenhouse gas emissions from forests and assure sustainable development for the implementing countries, like Zambia.

1.2.2 Specific Objectives

1. To understand how different actors, define the problems driving deforestation and forest degradation in Zambia and the implications on nature and focus of REDD+ strategies
1. To understand whether the proposed incentive-based REDD+ strategies can adequately address deforestation and forest degradation driven by demand for energy in countries like Zambia
2. To understand the political and economic interests that were influencing and shaping REDD+ strategies and policies and the impact this influence had on the mechanism ability to meet its objectives

1.3 Research Questions

The main question that this research was asking is: To what extent can the current incentive-based REDD+ programme help to address drivers of deforestation and an overall reduction in greenhouse gas emissions from deforestation and forest degradation and support sustainable development in Zambia?

Three sub-questions were asked to help answer the main research question as follows:

2. How do REDD+ actors describe and define the drivers of deforestation and forest degradation and how does this affect the focus of corrective strategies?
3. Can the REDD+ incentive-based strategies address deforestation and forest degradation driven by demand for energy in countries like Zambia?
4. How have the political and economic interest of actors influenced the development and implementation of REDD+ programmes in Zambia?

To explore these questions, the research employs a mixed method approach that involves the use of both qualitative and quantitative techniques. The focus is on analyzing global policy design and governance of REDD+ as a multi-actor mechanism with complex policy and financing regimes. Further analysis of actor agency in REDD+ at the national level was undertaken to appreciate the roles and influences of REDD+ actors in the design of REDD+ national strategy in Zambia. The implementation and localization of REDD+ are further evaluated using expert interviews with local REDD+ experts in Zambia as well as document analysis. Neo-Gramscian political economy perspectives are then used to explain the influence of varying economic and political interest of actors in shaping the REDD+ mechanism and the impact that such competing interests are likely to have on the expected outcome of the mechanism.

1.4 Research Hypothesis

The hypothesis of this research states that: The incentive-based REDD+ mechanism cannot significantly address the drivers of deforestation and forest degradation and further significantly contribute to sustainable development in Zambia.

1.5 Neo-Gramscian Political Economy Perspectives

This study draws on neo-Gramscian political economy perspectives of hegemony and its cognisant terms historic bloc, passive revolution, and war of positions, to explain the underlying political and economic interests that were influencing and shaping REDD+ strategies and policies (Cox, 1983; Bieler, 2001; Robinson, 2004; Matt and Okereke, 2014). The aim of this study was not only to critique, explain or smoothen REDD+ as a global policy for addressing GHG emissions from forests but to analyze the underlying interest and power influences among actors that were affecting the success of the programme. In addition, this study was interested not only in evaluating the feasibility of the REDD+ programme designed under the current world order succeeding, but also to come up with suggestions that would enhance it as a normative instrument for addressing deforestation and forest degradation.

The study analyses the global state and non-state political and economic interests that are negatively affecting the fight against deforestation and forest degradation. To achieve this,

therefore a historical explanation of the global governance process, discourses, and localization of REDD+ policy and the underlying motivations behind its development were conducted. In addition, practical examples and lessons of how the policy was being implemented in developing countries were analyzed to understand the challenges that REDD+ was facing in achieving its objectives. Finally, the study was interested in analyzing the normative aspects of REDD+ design and its implementation with the focus on how the policy proposes to address the drivers of deforestation and whether these proposals were attainable.

Although traditional theories of IR (such as neo-realism and neo-liberalism, regime theories) could have provided some useful insights that could help in analyzing REDD+ as a global programme, these theories are marked by two significant inadequacies. Firstly, they tend to take on a positivist methodology and secondly, they tend to legitimize the status quo of social and political structures (Stevenson, 2013). These theories assume that positivism provides the only basis of knowledge and is thus seen as the 'golden standard' against which other theories are evaluated (Newell, 2008). Traditional theories are however not radical enough to answer the underlying power, interest, and influences behind international policies and governance process (Bieler and Morton, 2004; Robinson, 2004; Newell, 2008; Jubas, 2010; Caruso, 2016)

Peter Newell (2005; 2008), for example, makes interesting points as to why radical approaches like the one this research is proposing were important in today's understanding of global environmental governance. Firstly, he says that a critical political economy approach would locate global environmental governance within broader patterns of governance designed to promote and manage the globalization of the economy. Secondly, that traditional IR approaches lacked a clear articulation of contents and application of a coherent political economy approach that had potential to provide explanations across diverse issue areas, offering a different view of globality to global environmental governance.

Newell (2008) and Stevenson (2013), further suggest that the inadequacy of traditional theories is in the fact that, they do not question the current political and economic world order but only hopes to smoothen it by addressing the problems in it. They suggest that

these theories were failing in as far as climate change mitigation and adaptation were concerned, thereby justifying the need to engage the more radical approaches like critical international political theory.

Neo-Gramscian political economy approaches thus proved useful in answering the questions that this study raises. Much of these justifying reasons why neo-Gramscian Political Economy is suitable are obtained from Robert Coxes (1983) claims about the usefulness of this theory in explaining the role of non-state actors in the multi-actor and multi-scale global environmental governance. He suggests five supporting reasons which this research adopts. Firstly, the idea that Neo-Gramscian perspectives recognize the agency of civil society and actor's other than the state in shaping policies as well as managing common problems. Secondly, he claims that the neo-Gramscian approach had a broader conception of power making it more useful for capturing dynamic nature of issues of authority, autonomy, and legitimacy that is implicated in the rising involvement of private and non-state actors in the governance of the environment. Thirdly, it's the idea that Gramscian perspectives are sensitive to the complex relationship between agency and structure as well as the underlying connections between states, capital, and social institutions? Fourthly, is the notion that Gramscian perspectives put emphasis on analyzing the process of political contestation and compromise. Lastly, Gramsci ideas provide a conceptual link between national and international making it easier to understand the rigid international versus local challenges imposed by traditional IR approaches (Cox, 1983; Bieler, 2001; Robinson, 2004; Matt and Okereke, 2014).

1.6 Methodology

This research used qualitative techniques the included document review, expert interviews and systematic literature review. The study used content analysis to analyse the documents and the interview scripts.

1.7 Key Findings of the Research

This study has found that REDD+ in its current frame will have little impact in reducing greenhouse gas emission from forests in Zambia. The following are the reasons: Firstly the mechanism fails to properly define and prescribe strategies that would address real

problems driving deforestation and forest degradation, which, according to the IPCC and UNFCCC is the main problem REDD+ should be solving (UNFCCC, 2008, 2013; Delacote, Robinson and Roussel, 2016). What is evident in the case of Zambia, for example, is the problem of how energy driven deforestation is classified, named and rated. This study found that energy was presented in a disintegrated form as charcoal production, use of wood fuel, use of wood for drying tobacco, and use of timber in industrial kilns. These different ways of use of wood 'energy' are further placed under drivers of forest degradation and not drivers of deforestation hence undermining their level of importance in the REDD+ policy interest and focus. The study further, found that if these fragments are correctly categorized 'energy' became the main driver of both deforestation and forest degradation in Zambia. It was, in fact, found that most experts discussed these fragments just as energy and ranked it as the main driver of deforestation and forest degradation. Most experts interviewed felt that the unreliable supply of clean energy, low levels of connectivity to the grid and high cost of clean energy were the main reasons behind energy driven deforestation and forest degradation in Zambia.

Secondly, the study finds that the idea of using incentives as suggested under REDD+ was most likely going to fail to achieve its intended objective of influencing forest communities from cutting down trees especially for energy purposes. It is found that the incentives would be inadequate and does not clearly provide information on access, sustainability and how the common person on the ground was going to benefit.

The study also found that there is an existing incentive for farmers that are targeted at increasing agriculture production in Zambia. This is a government supported programme which is implemented and promoted under the government's policy of diversifying its economy away from dependency on mining to agriculture. This study found that the REDD+ incentive must, therefore, counter this incentive for it to have a significant impact on the protection of forests that are lost due to agriculture expansions.

This study argues that the REDD+ mechanism does not escape the world system in which material power was dictating policy design and focus. By looking at REDD+ mechanism, in terms of its finance as well as strategies, this study has revealed that reward and coercive power through the use of financial and material advantage was being used in developing

REDD+ methodological guidelines and the narrative that was eventually shaping how nations received and localized REDD+. Unless REDD+ takes a normative and precautionary principle, the mechanism will fail to achieve its central objective of mitigating climate change.

1.8 Contribution to Theory, Policy, and Practice

1.8.1 Contribution to Theory

This study uses the neo-Gramscian political economy lens and its concepts of hegemony, historic bloc, passive revolution and war of position to analyze the REDD+ mechanism.

The thesis has made a contribution to this growing use of critical theoretical approaches in understanding and explaining the governance of global climate change instruments such as REDD+. The thesis has demonstrated that Neo-Gramscian approaches are useful in bringing out underlying interests, influences and interactions of state and non-state actors in driving and controlling global climate change programmes. It has shown how rich states come together as a historic bloc around a common interest of having a cheaper mitigation strategy and push for its acceptance by poor states through the use of finances and ideas aided by non-state actors. REDD+ is supported based on the notion that it was a 'cost-effective' strategy available for addressing forest-related greenhouse gas emissions.

The thesis has also shown how global terms and narrative of REDD+ have been driven down to national REDD+ processes and used to affect the nature of strategies; their focus as well the mix of national institutions to lead the mechanism. It makes a clear observation in the way non-state actors working as consent seeker and legitimizing agents of REDD+ ideas and interests of the rich states that were financing them and the programme. Financial superiority and their position as 'experts' gave these actors stronger agency in the REDD+ processes in developing countries like Zambia. The thesis has shown that by merely promising financial rewards, REDD+ was received and consented to by poor states who are interested in the money to supplement their poorly funded environmental sectors. These countries did not consent to REDD+ with the belief that the mechanism will achieve its central objectives but because doing so was a new condition to access extra finances from the international community. The example is seen from experts in Zambia who said they

did not see anything radical or new in REDD+ compared to past and similar programmes that did not leave a significant impact in the management of forests.

The thesis finds that economic interests are the motivation behind passive revolution ideas used in securing consent for REDD+ than the mechanisms normative objectives of reducing greenhouse gases. The thesis also shows that the promise of incentives as well as the coordinated alliances involving states of developed nations (bilateral agencies) and international non-state actors (UN-REDD+; FCPF) made it difficult for developing states like Zambia to counter REDD+ in a war of position. An attempt to shift or suggest 'radical' strategies outside the globally set guidelines and rules means to delay or not receiving finances for implementing such strategies. Developing countries are in a hurry to access finances and thus are shoehorning their strategies to reflect wishes and interests of the financiers to qualify for the Early Movers Funds promised by rich states.

The study has shown how Neo-Gramscian concepts of the historic bloc, passive revolution, and war of position are useful tools in understanding and explaining the underlying interests and influences shaping global climate change instruments like REDD+ which are multi-actor multi-scale programmes. The study has also shown that while the dominated group is unable to counter the passive revolution strategies of the dominant group, the concept of war of position is a useful lens that helps the researcher to appreciate the power of the historic bloc and its use of passive revolution strategies to gain and maintain its hegemonic status.

1.8.2 Contribution to Policy and Practice

To what extent will the incentive-based REDD+ achieve its central objective? This thesis finds that in its present frame REDD+ will have a very little impact on reducing Greenhouse Gas emissions (GHG) and enhancing sustainable development. The thesis shows that the mechanism has not properly described the problems driving deforestation and forest degradation and gave primacy to agriculture while underplaying other equally important drivers such as energy demand. The nature and focus of proposed strategies and finances also focussed on using agroforestry and agriculture as the main activities for addressing various forms of drivers. The thesis also shows how the incentives suggested under REDD+ will fail to break the social economic and political barriers behind drivers

of deforestation and forest degradation. The REDD+ conditional incentives are inadequate, uncertain on flow, uncertain on sustainability and promised to come (or not) at long time intervals.

This thesis thus suggests that there be a rethink in the way drivers of deforestation and forest degradation are described in order to have a fair appreciation of the problem. This should also be followed by designing radical strategies that focus on getting the job done by addressing the real drivers of deforestation and forest degradation in a country context. The incentive structure of REDD+ will require restructuring to include large-scale investments such as in renewable energy to address the energy led deforestation and forest degradation which is clearly one of the main drivers of both deforestation and forest degradation.

For all this to happen, this thesis suggests that REDD+ be renegotiated from a more precautionary and normative position and not from the cost-effective position that puts financial interests above the urgent and serious need to save planet earth

1.9 Structure of the Thesis

This thesis has eight (8) chapters structured as follows:

Chapter one is the synopsis of the whole thesis highlighting the research background and themes that the thesis discusses in detail in the follow-up chapters. The chapter also presents research questions, research objectives, and the research hypothesis. It goes further to highlight the theoretical and conceptual settings that underpin the study before making a brief highlight of some key findings and contribution that the study makes to the body of knowledge.

Chapter two is the literature review. This chapter presents the broader as well as specific debates and works around climate change and REDD+ programme. The chapter also helps explain the study context and gaps that the research addresses drawing upon both background information and contemporary work being done on REDD+ and climate change mitigation.

Chapter three presents and explains the theoretical lens that is adapted to analyze and the findings that data that the research obtained. Here, the neo-Gramscian political economy theory is discussed and combines focussing on governance and power structures and influences that was shaping the evolution of REDD+ and its anticipated outcomes.

Chapter four presents a contextual and methodology chapter. It gives a description of Zambia as a REDD+ piloting country and case example suitable for this kind of Zambia. It explains the political, economic, social and environmental setting as well as the geographical position of Zambia. It also presents the contextual setting of the UN-REDD+ programme by exploring the institutional, political and legal settings in the governance of forests that REDD+ is interacting within Zambia. The chapter further gives an account of the key features of the National REDD+ strategy in Zambia. Further, the chapter presents the methods employed in the collection of Data. It describes the various steps and methods that were employed in the collection and analyzing of data.

Chapter five presents' findings and a discussion on how different actors define or perceive the problems driving deforestation and forest degradation. It shows results obtained from document review and expert interviews conducted in Zambia.

Chapter six presents the findings and a discussion of whether REDD+ strategies developed in countries like Zambia would counter the drivers driven by energy demand. The results obtained focused on answering the question about whether the incentive strategy would help address the energy-driven deforestation and forest degradation in Zambia.

Chapter seven discusses the politics of participation in the design and implementation of REDD+ strategies focussing on Zambia. It uses the Neo-Gramscian perspectives of the historical bloc, passive revolution and war of positions to analyze the governance and prospects of the UNFCCC recommended REDD+ achieving its central objectives.

Chapter eight provides an overall conclusion of the thesis highlighting the key findings and their implication for REDD+ policy. The chapter further shows the contribution of the study to the body of knowledge and policy practice. It ends by presenting opportunities for further research that have emerged from this study.

2 CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the REDD+ literature starting from the initial debates on the contribution of forests to climate change and leading to its framing as a global policy and down to the implementation at the national level. The review explores the governance debates and concepts that have shaped the mechanism as well as the challenges that the programme faces in attaining its central objective. The review covers key issues such as leakage, safeguards and the complex challenges of local participation faced in implementing REDD+ and how this was being addressed in REDD+ programmes. A critical review of the role of international REDD+ actors including bilateral, multilateral and civil society, is also provided to understand how they have conceptualized REDD+. The Chapter also covers the debates about the idea of using incentives to address the drivers of deforestation and forest degradation under the REDD+ mechanism. The chapter then reviews the methodological approaches recommended by UNFCCC decisions focusing on the language in naming, classifying and rating of drivers of deforestation and forest degradation. The section ends by looking at how Zambia has been handling deforestation and forest degradation before REDD+ looking at the institutional design, policy frameworks as well as challenges faced in responding to the problem of deforestation.

2.1 Reducing Emissions from Deforestation and Forest Degradation (REDD+)

2.1.1 Evolution of REDD+

Having recognised that deforestation and forest degradation mostly in tropical forests of developing countries was contributing about 17-20% to Global Greenhouse Gases emissions, (Visseren-Hamakers and Vijge, 2012; Bluffstone, Robinson and Guthiga, 2013; Rakatama *et al.*, 2016) a policy called Reducing of Emissions from Deforestation and forest Degradation (REDD+) was established by the UNFCCC (Willem *et al.*, 2013). In its initial stages the process was discussed as the only Reduction of emissions from Deforestation "RED" but later extended to cover forest degradation + sustainable management of forests; conservation of forest carbon stocks; and or enhancement of forest carbon stocks (Pistorius, 2012; Climate Law and Policy, 2014). The central objective of REDD+ is, therefore, to reduce greenhouse gas emissions from deforestation and forest degradation in tropical

forests of developing countries and further support conservation and sustainable development programs by providing incentives to forest communities (Fumpa-Makano, 2011; Newton *et al.*, 2015b).

Although the discussion of dealing with emissions from deforestation go back to the 1992 Kyoto Protocol (Deheza and Bellassen, 2012; Heinrich *et al.*, 2015), serious debates leading to the establishment and inclusion of the global policy on deforestation and forest degradation in international negotiations in climate change mitigation, started around 2005 (Corbera and Schroeder, 2011a; Willem *et al.*, 2013). William et.al (2013) noted that discussions on forests prior to 2005 were dominated by developed countries with large areas of forests who wanted to be allowed to credit the protection of their forests and claim these credits to offset part of their national Greenhouse Gas emission (GHG) production.

In 2004 following protracted discussions and failure to agree on the inclusion of forest credits in accounting for emissions, a group of experts from academia, policymakers non-governmental organization (NGOs) and the private sector began to promote the idea of using climate funds to reduce deforestation (Pistorius, 2012; Willem *et al.*, 2013). Notable among the negotiators were Jeffrey Sachs-a prominent American economist; Joseph Stiglitz- an economist and academician; and Michael Somora- former prime minister of Papua New Guinea (Willem *et al.*, 2013; Knight, 2015). From a number of meetings, this group was able to push an argument that CDMs had and were failing because they did not "incentivize" developing countries to protect their forests (Rainforest Coalition, 2005).

Further to these discussions, the Stern review commission (2007) recommended that addressing deforestation and forest degradation in tropical developing countries was the most cost-effective way of addressing global greenhouse gas emissions (Stern, 2007; Hervey, 2012). The commission presented four possible ways of reducing greenhouse gases emissions as follows:

i. Reducing demand for emissions-intensive goods and services
ii. Increased efficiency, which can save both money and emissions
iii. Action on non-energy emissions, such as avoiding deforestation
iv. Switching to lower-carbon technologies for power, heat, and transport (Stern, 2007)

An agreement over the broad scope of what is today called REDD+ was reached at the UNFCCC conference of parties in Bali 2007, leading to the establishment of the Bali Action Plan (UNFCCC, 2008). The action plan in Article 1(b) iii calls for policy approaches and positive incentives on REDD, and on conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (Willem et al. 2013; UNFCCC 2008). The emphasis of REDD+ ever since Bali has thus been based on the idea of using incentives as a way to motivate forest communities to halt deforestation or increase their carbon stock (UN-REDD, 2008; UNEP, 2012; Rantala and Di Gregorio, 2014). This mechanism was seen by many as the post-Kyoto climate change agreement that bound both developing and developed countries to certain responsibilities in dealing with climate change (Brockhaus, Gregorio, and Carmenta, 2014)

REDD+ is now part of the global climate change Paris deal that was agreed in December 2015(Fischer, Hargita and Günter, 2016; Mbatu, 2016; Pasgaard *et al.*, 2016). Over 100 countries are today actively engaged in REDD+ preparation activities in readiness to participate in the global REDD+ implementation (FCPF, 2015; USAID, 2015).

2.1.2 Key UNFCCC Decisions on REDD+

Various decisions have been made to guide the global as well as national REDD+ strategy development process and implementation. The decisions were arrived at during the United Nations Framework Convention on Climate Change (UNFCCC) negotiations at the conference of parties. The Decisions provide standards of how REDD+ should be government, financed and implemented at international as well as local level. Some of these key decisions are presented here:

The first one is decision 2/CP.13 of the UNFCCC which formally established the idea of reducing emissions from deforestation in developing countries using incentives. The decision pushed for approaches that would stimulate action among actors (UNFCCC, 2014). It further acknowledged the contribution of deforestation and forest degradation to global greenhouse gas emissions and encouraged country parties to explore a range of actions and efforts leading to the demonstration of activities, to address the drivers of deforestation and forest degradation (UNFCCC, 2008; OECD, 2015).

Decision 4/CP.15, on the other hand, provides the methodological guidance for activities relating to REDD+ and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (UNFCCC, 2014). The decision acknowledges the idea of using positive incentives in the methodological approaches for REDD+ (Evans, Murphy and de Jong, 2014). It goes further to recognize the need for full and effective engagement of indigenous people and local communities in the implementation of REDD+. The methodological guidelines given under this decision relate to measurement reporting and verification of REDD+ activities as follows.

i. To identify drivers of deforestation and forest degradation resulting in emissions and the means to address these;
ii. To identify activities within the country that result in reduced emissions and increased removals, and stabilization of forest carbon stocks;
iii. To use the most recent Intergovernmental Panel on Climate Change guidance and guidelines, as adopted or encouraged by the Conference of the Parties, as appropriate, as a basis for estimating anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks, and forest area changes;
iv. To establish, according to national circumstances and capabilities, robust and transparent national forest monitoring systems.

Decision 1/CP.16-part C of the Cancun Agreement provides guidelines on policy approaches and the use of positive incentives on issues relating REDD+ and the role of conservation, sustainable forest management and enhancement of forest carbon stork in developing countries. This decision emphasizes that the aim of using positive incentives was to collectively slow, halt and reverse forest cover and carbon loss (Climate Law and Policy, 2014; UNFCCC, 2014). The decision further requires developing country parties to among other things and in accordance with national circumstances and respective capabilities to develop the following:

i. National forest reference emission levels;
ii. A robust and transparent national forest monitoring and reporting of activity framework;

iii. A system of providing information on how other safeguards are or were being addressed and recognized (UNFCCC, 2014).

The decision further requests developing country parties to address land tenure issues, forest governance, gender and participation of various stakeholders including indigenous people and local communities in the whole REDD+ processes. It requires all REDD+ activates, from preparation to implementation, to be carried out in phases. It further provides that these phases begin with the development of national strategy or action plan, policies and measures; and capacity building; then followed by implementation of the strategy/action plan and measures. There is also emphasis to have developing countries develop or create an internationally accepted mechanism for measuring, reporting and verifying the change in emissions as a direct consequence of implementing national REDD+ actions (UNFCCC, 2014).

Although the larger part of decision 1/CP.16 part C focuses much on what developing countries should do in form of guidelines, it also urges developed nations to provide support to developing countries through multilateral and bilateral channels, for the development of national strategies or action plans, policies and other REDD+ activities (Climate Law and Policy, 2014; UNFCCC, 2014). But what it does not do is compel developed countries to commit to the provision of these funds or indeed state in clearer terms how much and when such financing should be provided.

Decision 9/CP.19 of the Warsaw framework, on the other hand, re-affirms the financing criteria for REDD+ activities. The decision specifically addresses the following aspects:

i. Reaffirms that results-based finance may come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources;
ii. Encourages financing entities, including the Green Climate Fund in a key role, to channel adequate and predictable results-based finance in a fair and balanced manner, and to work with a view to increasing the number of countries that are able to obtain and receive payments for results-based actions;
iii. Establishes an information hub on the REDD Web Platform, to publish information on the results and corresponding results-based payments;

iv. Standing Committee on Finance to consider the issue of financing for forests in its work on coherence and coordination;
v. Recognizes the importance of incentivizing non-carbon benefits for the long-term sustainability of the implementation of activities referred to in decision 1/CP.16 (Caravani *et al.*, 2013; Climate Law and Policy, 2014; UNFCCC, 2014).

The UNFCCC consolidated these decisions at the Paris conference of parties in 2015 and agreed that REDD+ was going to be part of the main climate change agenda post the Kyoto Protocol (UNFCCC, 2015b; Mbatu, 2016). The Paris Agreement encourages the different parties to implement and support, including through result based payments, the established frameworks, guided by the various previous COP Decisions to address deforestation and forest degradation and enhance sustainable development and conservation (UNFCCC, 2015a).

2.1.3 Key Actors and their roles in Designing REDD+

i. The IPCC

The IPCC is a scientific and intergovernmental body that is responsible for reviewing the most current scientific, technical, social and economic research conducted globally and relevant to the issues of climate change (IPCC 2007; Panel et al. 1988). It was established in 1988 by the World Meteorology Organisation (WMO) and the United Nations Environment Programme (UNEP), largely under the insistence and support from the USA government (Tol 2011; Beck 2012; Panel et al. 1988; IPCC 2007). Its main aim is to collect and reflect a diverse range of views and expertise on climate change (Ipcc, 2007). The organization does not conduct research on its own but relies on voluntary work from scientists from around the world (Panel *et al.*, 1988; Ipcc, 2007).

Because of its presumably scientific and arguably 'inclusive' nature, the IPCC is envisaged to possess a unique opportunity to provide rigorous and balanced scientific information to and for decision makers (Beck, 2012). In fact, the IPCC commands a lot of respect in the climate change science debates both in academia and development practice. The reports from the IPCC for example, have gone on to shape both international and local policies on the environment generally and climate change. Further technological innovations and

energy shifts have been directly influenced by the reports and recommendations from the IPCC (Hulme and Mahony, 2010; Ho-Lem, Zerriffi and Kandlikar, 2011).

But, there are arguments both in development and academic literature that challenge not only the organizational setting but also the processes that the IPCC through its working groups uses in reviewing and selecting which science and from where gets to be included in the synthesis reports (Hulme and Mahony, 2010; Tol, 2011). These arguments provide interesting insights into this study's thinking of the political and economic interest and bias that IPCC exerts in global policies like REDD either deliberately or unwittingly. A clear example is Bagla (2010) and Schiermeier, (2010), who conducted the scientific and political scrutiny of the IPCC. Bagla an Indian journalist, who won the American Geophysical Union Journalism award, challenged the IPCC report wording forecasting Glaciers imminent demise, as alarmist and not grounded in science (Bagla, 2010). On the other hand, Schiermeeir (2010) was more critical of the IPCC rules and procedures which he said were problematic leading to significant scientific errors such as the report on the melting of the Himalayan Glaciers by 2035 which the institution had to backpedal (Kosolosky, 2015). While these critiques do not directly hinge on the issue of REDD+, they communicate the weaknesses that the IPCC faces today and the risk they pose.

Hulme (2010) also produced a review article under the theme; Climate Change, titled "What do we know about the IPCC?" In this review, he notes the growing criticism of the IPCC in terms of, expertise and participation; governance and learning; consensus building and uncertainty, and; impact and influence. For example, on expertise and learning, Hulme (2010) noted that analysts who examined the disciplinary biases in, or profiles of, the knowledge assessed by the IPCC, found that the most relevant social science in the IPCC was economics. He argues that this situation had resulted in marginalizing knowledge about climate change, which emerges from disciplines such as anthropology, psychology, communication science, philosophy, and history (Hulme, 2010).

The critiques of the IPCC, however, have led to the IPCC continued to attempt to correct both the science and improve on the governance and procedures to make it more transparent and inclusive (Beck, 2012). There, however, remains a great amount of work in terms of balancing the numbers of contributors by geography and by specialization. For example, a

recent study on the social structure of the IPCC by Mark et al (2014), again revealed that the contributing authors and leaders of the working groups were still highly polarised towards developed countries. The study also revealed a lot of economists from developed countries taking up a huge space in the contribution to the synthesis reports (Mark, James and Fuller, 2014). These findings confirm the results of previous studies dating between 1992 to 2011 by various scholars who also questioned the bias of the IPCC in both profession and geographical representation of the authors to the climate change science. This is what Hulme and Mahony (2010) had to say about IPCC bias:

> "The proportion of IPCC authors and reviewers from OECD versus non-OECD had not changed. For each of the Second, Third and Fourth Assessments Reports of the IPCC, the percentage of both authors and reviewers from the OECD nations has remained remarkably constant at between 80 and 82 percent" (Hulme & Mahony 2010: 12)

Kandlikar & Sagar (1999) also examined the IPCC First and Second Assessment Reports with respect to the participation of Indian expertise and found that participation was heavily skewed in favor of some industrialized countries.

Kandlikar & Sagar (1999) posit that the consequences of having a skewed 'geography of IPCC expertise' was significant and affecting the construction of IPCC emissions scenarios. Hulme (2010) also advanced that the polarised proportion of authors in terms of geography and profession was also affecting the framing and shaping of climate change knowledge and the legitimacy of the knowledge assessments themselves.

Mayer and Arndt (cited in Hulme 2010) on the other hand, warn against the impact of what they term an 'epistemological hegemony' of the IPCC. This is what they say:

> "One thing that nearly all commentators and critics agree on about the IPCC is that it has had a significant influence on climate change knowledge, on public discourse about climate change and on climate policy development. They may disagree about the exact reasons for this influence and whether this influence has always been for the best" (Hulme, 2010: 13).

There is a reason, therefore, to believe that the IPCC is highly controlled by countries and cooperation's who have both the science and the financial resources needed to drive and to design global climate change policies like REDD+ in favor of their political and economic interest (Gareau, 2012).

Despite all these negative challenges, the IPCC has remained significantly influential in climate change science and policy design (Ho-Lem, Zerriffi and Kandlikar, 2011; Spagnuolo, 2011; Schmidt, Ivanova and Schäfer, 2013; Cairns and Stirling, 2014; Geck *et al.*, 2014; Nasiritousi, Hjerpe and Buhr, 2014; DeLeo, 2016; Dryzek and Pickering, 2017). IPCC has gained public spaces as the authoritative voice of climate change knowledge and that this knowledge is traveling fast and influencing both science and policy (Hulme and Mahony, 2010; Tol, 2011).

This thesis, therefore, draws from this debate to see how these global governance institutions influence REDD+ programmes in Zambia. Interest is on how the language used by such an institution as the IPCC was influencing the design of local national REDD+ strategies and the outcome thereof.

ii. The UNFCCC

The United Nation Framework Convention on Climate Change (UNFCCC), is yet another critical and highly influential organization in as far as global climate change is concerned and thus very vital to be evaluated under this study (Reinecke, Pistorius and Pregernig, 2014; Kern and Rogge, 2016). The organization was birthed in 1992, as a response to the revelation that the earth was warmer and would lead to irreversible adverse impact. It was established as a basis for a global response to the problem of climate change. The convention took effect in 1994 and has a membership of 196 parties (UNFCCC, 2015c; Hargita, Günter and Köthke, 2016). The objective of the UNFCCC is to stabilize the concentration of greenhouse gases in the atmosphere at levels that would prevent dangerous human interference with the system. Key to this objective is that it must be achieved within a time frame sufficient to allow ecosystems to adapt naturally to the changing climate and ensure that food security is not threatened and that economic

development continues sustainably (Streck *et al.*, 2009; Reinecke, Pistorius and Pregernig, 2014; Zakkour, Scowcroft and Heidug, 2014; Gupta, 2016).

The UNFCCC organizational bodies include the Conference of Parties (COP), which is the supreme decision-making body of the convention. The COP, meetings provide the primary platform for promoting and reviewing the implementation of the convention and any related legal instruments. The other body is the UNFCCC secretariat, which provides the administrative function of arranging various sessions and facilitating assistance to the convention parties. The UNFCCC financial body is called the Global Environmental Facility (GEF) and its primary responsibility is to receive and distribute funds for climate change mitigation and adaptation programmes.

To guide its functions, the UNFCCC has three critical principles it relies on (refs). The first one is the principle of "common but differentiated responsibility". This principle acknowledges that everyone is responsible and must act or contribute to the efforts of addressing climate change although greater responsibility falls on developed countries. This principle requires developed counties to lead global efforts of combating climate change. The second principle is the promotion of a supportive and open international economic system that would lead to sustainable economic growth and development. The last principle is the precautionary principle, which advances the idea that countries must act to address the climate change challenge even in the face of scientific uncertainties.

Because of its global representation, just like the IPCC, the UNFCCC clearly occupies a hugely influential position in driving both international and national climate change policies. The convention is also significantly influential in shaping academic, economic and political debates as well as scientific innovations and research. It also facilitates continued international relations through constant engagement of countries on climate change related issues. The UNFCCC commands a lot of respect as a leading body in global climate change policy development and enforcement (Castro, Hernlein and Michaelowa, 2014; Nasiritousi, Hjerpe and Buhr, 2014).

However, just like the IPCC, the UNFCCC has also not escaped the academic and political scrutiny about its inclusiveness, structure, processes and or procedures in arriving at

decisions. For example, Stevenson and Dryzek (2013) questioned the UNFCCC democratic status, arguing that democracy in terms of both deliberative democracy and process was needed for a global climate change governance to succeed. They challenged Luke's view who argued that global environment governance needed an authoritarian approach for it to be effective (Stevenson and Dryzek, 2013).

The other debates about the UNFCCC have bordered on the establishment of various interest groups such as the South-to-South Alliance, the European Union group; the annex one and non-annex 1 countries. Many other groups have been formed on the basis of either geographical positioning (vulnerability to climate change), shared economic and political interests or indeed the interpretation of the climate change science itself (Castro, Hernlein and Michaelowa, 2014). These clusters have largely influenced the direction of the debates and subsequently the design of global climate change policies and agreements (Castro, Hernlein and Michaelowa, 2014).

Castro et al. (2014) argued that the powerful and rich nations had the largest potential of entering several associations due to their ability to sponsor researchers and representatives to attend any meetings of interest on climate change.

Therefore, although the UNFCCC continues to evolve in terms of trying to listen to everyone and take their interests on board, the institution remains vulnerable to the dictations of powerful well-coordinated groups and rich countries that finance almost all programmes under the convention, such as REDD. These states also control the technology for scientific research as well as for mitigation programmes thereby making them indisputably the major stakeholders or determinants of the climate change discourse as well as interventions. These discussions clearly demonstrate the vulnerability to control and manipulation by powerful states who want to drive across their national political and economic interests in the global environmental governance space.

iii. Developed Countries and REDD+

The developed countries or OECD countries clustered under *Annex 1* countries of the UNFCCC climate change groups are the major donors of REDD+ programmes. The annex 1 group is represented by 43 countries whose contribution to global greenhouse gases is

significantly larger than the rest of the world. These countries are highly industrial with large economies (UNFCCC, 2008; Ho-Lem, Zerriffi and Kandlikar, 2011). Under the Kyoto Protocol, the Annex 1 countries were the only ones that had committed GHG emission reduction targets due to their significantly high emissions from energy consumptions. The USA however, did not commit to these targets because of economic and political reasons even though they cited scientific uncertainties in the climate change science (Stern, 2007; Castro, Hernlein and Michaelowa, 2014).

But the role of these countries as guided by decision 4/Cop. 15 of the Convention and motivated by the principle of: "common but differenced responsibility", is mainly to lead in financing global responses to climate change (UNFCCC, 2008, 2014). The countries do this either through the UNFCCC established organs, the multilateral institutions like the World Bank, European Bank, private companies within these countries as well as through direct state to state finance(Corbera and Schroeder, 2011a; GCF, 2015). This global setting in terms of climate change finance and overall governance is reflected in several past and present climate change policies such as the Low Carbon Development agenda, the Clean Development Mechanism as well as the REDD+ programme under the UNFCCC. For example, countries like the United Kingdom, Germany, and Norway, have come together to finance REDD+ either through the United Nations-REDD+ programme or directly to the implementing developing countries (GCF 2015; Corbera & Schroeder 2011a; Germany, Norway, and the United Kingdom 2014).

Interestingly, however, donor financing to climate change has from inception been the highly debated and remains the most controversial issue under climate change negotiations today (Lander, 2011; Sullivan, 2011; Li and Sabbaghi, 2013). Some of the initial debates were largely around compensation of historical pollution, transferring of technology from north to south, financing adaptation and mitigation programmes in the global south; establishing of new fund different from usual ODA and many others. In the case of REDD+ the questions of how much and when the money will flow and sustainability of the finance, have also taken center stage (Murray, 2008; Irawan, Tacconi and Ring, 2014; Grima *et al.*, 2016).

It is important to point out that the donor countries, by the above understanding or indeed by default, possess both the technical and financial power that can make and or break both the climate change science as well as the global governance of climate change. In fact, these countries either through the multilateral or bilateral means have largely influenced the global design and outcomes of policies such as the Structural Adjustment Programme (SAP); the HIPIC completion Point programme; The Millennium Development Goals (MDGs); Clean Development Mechanisms; the Low Carbon Development and now REDD+ mechanism under UNFCCC (Scott, 1977; Stern, 2007; Castro, Hernlein and Michaelowa, 2014). For climate change, related policies, a good example is the setting up of the Stern Review commission by the UK government which produced one of the most influential reports in climate change discourses globally today(Stern, 2007). The report has influenced both the academic and political discourses on climate change and further being at the center of climate change negotiations and subsequent development of global mitigation and adaptation policies including REDD+.

Although this economic and political influence is evident in several past climate change programmes, the question of how this kind of influence was affecting the design and outcome of climate change programmes like REDD+ becomes important, for two reasons. Firstly, climate change threatens the very existence of humanity regardless of geographical position or financial status, and thus must be approached from a precautionary principle perspective. Secondly, reacting to the challenge of climate change is not only an ethical responsibility but is also a time-dependant issue, which requires everyone to act now.

iv. Developing Countries in REDD

According to the UNFCC (2009) a REDD+ participating country is defined as a developing country whose geographical location is in the subtropical or tropical area that has applied and signed to participate in the readiness process. Once selected the participating country is expected to undertake the readiness activities as outlined by the UNFCCC decisions on REDD+ (UNFCCC 2009). These include establishing of governance structure; undertaking sensitization programmes, undertaking policy reforms as well as other readiness activities required for the implementation and out-scaling of REDD+.

Two international REDD+ readiness support organizations were established to provide technical training and financial support to participating countries on REDD+. They include UN-REDD+ and the World Bank-led Forest Carbon Partnership Facility (Thompson, Baruah and Carr, 2011b; Angelsen *et al.*, 2012; FCPF, 2015). As at 2016, over 100 developing countries had signed up for REDD+ readiness support programme and were actively putting in place necessary institutional and legal frameworks in readiness for the global programme (Thompson, Baruah and Carr, 2011b; Angelsen *et al.*, 2012; FCPF, 2015).

But the readiness process has faced and continues to face challenges in terms of harmonizing international expectations and local or contextual challenges in forest governance. Particular challenges noted in the literature, have been more about how to design the national REDD+ governance structure that takes care of the competing social economic and political interest among the many stakeholders within these countries (Cadman and Maraseni, 2012a; Rantala and Di Gregorio, 2014; Koch, 2016a).

The implementing country, according to the UNFCCC decisions on REDD+, is however expected to develop readiness strategies that are in conformity with the internationally set guidelines on REDD+ for it to be able to participate in the future global REDD+ regime (FCPF, 2015; UN-REDD, 2015; UN-REDD Programme, 2015).

2.1.4 The UNFCCC Agreed Methodological Approaches for REDD+

The REDD+ mechanism was designed to function under the environmental governance system with set out methodological guidelines on the development of national strategies. Decision 1/Cp.16, for example, says that REDD+ be implemented in phases beginning with the preparation phase, through to implementation. The decision and subsequent decisions emphasize the need for implementing developing country parties to meet the set guidelines while recognizing differences in country contexts. The three phases which each party participating in REDD+ is expected to follow are as follows:

i. Phase One- preparation

Phase one or the preparation phase requires participating countries to prepare their National REDD+ strategies or actions for addressing deforestation and forest degradation within the context of their country situations. The phase includes also the development of policy measures, institutional frameworks, conducting capacity building and sensitization programme, all for the purposes of creating an enabling environment for effective implementation of REDD+ activities. Further, the phase involves the determination of national emission reference levels as well as a mechanism for Monitoring, Reporting, and Verification (MRV) of measurable REDD+ activities. The final expected output from this phase is the establishment of the information sharing mechanism for all REDD+ and related activities in the country (Streck *et al.*, 2009). The process of developing the National REDD+ strategy or action plan thus involves specific activities. They include: identifying the real drivers of deforestation and forest degradation specific to the country; identifying the leakages associated with implementing REDD+; identifying of already existing institutions; policies and forest management activities related to REDD+; and, conducting training and sensitization workshops on REDD+ (Corbera and Schroeder, 2011a; Tegegne *et al.*, 2016).

ii. Phase Two

Phase two is the trial phase. This phase was designed to allow the developing country that has successfully prepared an internationally accepted National Strategy or action plan, to implement the set activities and policy measures as a way of trying out and drawing lessons for further adjustments of the strategy. During this phase, more capacity building, technology development, and transfer and result based demonstration activities would be carried out in readiness for phase three (Streck *et al.*, 2009).

iii. Phase Three

Phase three is the out-scaling phase which according to the UNFCCC, implanting countries are expected to carry out full result based activities (RBA) that should be fully Measured Reported and Verified (Minang, Van Noordwijk, L. A. Duguma, *et al.*, 2014; Pasgaard *et al.*, 2016). It is at this stage that a REDD+ implementing country, which has satisfied the

international set guidelines, would begin receiving payments in form of carbon credits equivalent to the avoided deforestation and forest degradation.

According to the UNFCCC, no REDD+ participating country had reached phase three as of July 2016. Most of the participating countries were still dealing with the preparation phase, and adjusting national strategies and plans as well as setting up monitoring, reporting, and verification frameworks. There were, however, trial REDD+ projects which had started and where providing key lessons for the out-scaling of the full programmes within certain countries (Angelsen *et al.*, 2013; Tegegne *et al.*, 2016).

2.1.5 The UN-REDD

The United Nations REDD+ (UN-REDD) programme was set up with the intention to help developing countries to get ready to participate in the international REDD+ programme proposed under the UNFCCC (UN-REDD, 2009b, 2015; Redd, 2013). It comprises three major organs of the UN which include: the Food and Agriculture Organisation (FAO); United Nations Environment Programme (UNEP); and United Nations Development Programme (UNDP) (UN-REDD 2008; Corbera & Schroeder 2011a; Mining & van Noordwijk 2014).

At inception, the UN-REDD+ with support from Norway, Denmark, European Union, Japan, Luxembourg, and Spain provided funds to support the developing countries prepare for the REDD+ programme. About 9 tropical developing countries were selected to pilot REDD+. They included Zambia; Tanzania; Democratic Republic of Congo; Indonesia; Viet Nam; Panama (UN-REDD, 2009b; UN-REDD Programme, 2010; UNDP-MDTF, 2011).

2.1.6 The Forest Carbon Partnership Facility (FCPF)

The other similar programme to the UN-REDD+, established to pilot the REDD+ programme was Forest Carbon Partnership Facility (FCPF). It also draws its methodological guidelines from the UNFCCC decisions (FCFP, 2014; Mbatu, 2016). The FCPF has two funding streams that are designed to facilitate the preparation of country readiness plans and emission reductions. These are The Readiness Fund and the Carbon Fund. In 2015, the facility had raised 829 million United States Dollars (FCPF, 2015).

According to the FCPF (2015) annual report, the facility had grown its number of participating countries to 47 by 2015. They included 18 from Africa; 18 from Latin America and 11 from Asia-Pacific Region. A total of 17 funders comprising 15 developed countries; 1 private company and 1 non-governmental organization have contributed to the FCPF REDD+ programme (FCPF, 2015).

2.2 Drivers of Deforestation and Forest Degradation

According to the IPCC (2012), *deforestation* is defined as the destruction of forest habitats by clear-cutting or convention of the forest to other land uses, such as agriculture. Forest *degradation*, on the other hand, is defined as the change in the quality of forests and forest ecosystems through the loss of key species (Kissinger, Herold and De Sy, 2012). Forest degradation is often a result of selective logging, extraction of non-timber products and or due to uncontrolled bush fires (Kissinger, Herold and De Sy, 2012). The two, however, are closely linked, with degradation seen as the precursor to deforestation.

Drivers of deforestation and degradation are therefore defined as human activities that impact forest cover and result in loss of carbon stock (Kissinger, et.al 2009). International discourse on drivers of deforestation and forest degradation, reflected in national REDD+ strategies, divide drivers into two categories that are, proximate drivers and underlying drivers. The proximate drivers of deforestation and degradation according to IPCC (2012) are those human activities that directly result in forest cover loss and or degradation.

Decision 2/CP 13; 1/CP.16 and 2/CP 17 of the UNFCCC conference of parties, guides that all countries participating in REDD+ must conduct specific studies to determine the real drivers of deforestation and forest degradation within their national context as a precursor for the development of national REDD+ strategies or action plans (Reinecke, Pistorius and Pregernig, 2014; UNFCCC, 2014). Decision 15/CP.19 further reaffirms the importance of addressing drivers of deforestation and forest degradation in the development and implementation of national REDD+ strategies and or action plans (UNFCCC, 2014). This decision recognizes that drivers of deforestation and forest degradation had many causes requiring unique and country context actions to address them. The decision also notes that livelihood may be dependent on activities related to drivers of deforestation and forest

degradation and that addressing these drivers was likely to have economic cost and implications for local resources and economic development (UNFCCC, 2014).

There seems to be, in fact, a general agreement in the scholarly literature that drivers of deforestation and forest degradation were different by country and or geographical location or indeed by the level of development (Vinya *et al.*, 2011; Houghton, 2012, 2012; Visseren-Hamakers and Vijge, 2012; Angelsen *et al.*, 2013). This situation justifies the call for individual countries to carry out a thorough study of its own situation to come up with a strategy or action plan that addresses specific issues identified in that country.

In general, the IPCC (2012) lists the following drivers of deforestation and forest degradation as the main ones across the globe: agriculture, logging, charcoal production, wood fuel extraction, settlement, bushfires and poverty (Kissinger, Herold and De Sy, 2012). The underlying or secondary drivers of deforestation and degradation are the structural human activities such as poverty, lack of employment, need for extra revenue, poor regulatory frameworks as well as population increase (Vinya *et al.*, 2011; Hervey, 2012).

Agriculture is said to be the number one proximate driver of deforestation with 80 per cent of global deforestation attributed to it. Charcoal production and wood fuel collection is set as the number one driver of forest degradation in sub-Sahara Africa responsible for 48 per cent of forest degradation in this region (Kissinger et al. 2012; Mining, Van Noordwijk, L. a Duguma, et al. 2014).

However, the design of REDD+ and decisions from the UNFCCC on drivers of deforestation and forest degradation seem to suggest that REDD+ activities should be directed more on addressing agriculture led deforestation and forest degradation.

2.3 The Use of Incentives in REDD

The use of money in form of incentives by developed nations to reward developing countries that have demonstrated reduction or avoided emissions by addressing deforestation and forest degradation, is the underlying principle on which the future of REDD+ is promised (Deheza and Bellassen, 2012; Evans, Murphy and de Jong, 2014;

Korhonen-Kurki *et al.*, 2014; Rantala and Di Gregorio, 2014; OECD, 2015). The UNFCCC decision guides that REDD+ programme shall be organized as incentive-based approaches to forest protection and conservation (Deheza and Bellassen, 2012; UNFCCC, 2014, 2015b). Rule 2 of the REDD+ rulebook states that REDD+ shall use incentives to motivate developing countries to put up measures and implement result based forest management practices that demonstrate a measurable and verifiable reduction in deforestation and forest degradation as well as increased carbon stocks (UNFCCC, 2014).

The understanding behind the use of incentives is that developing countries will be motivated to implement forest reforms that encourage greater community participation in forest governance as well as encourage benefit sharing among the various stakeholders, especially the forest communities (Deheza and Bellassen, 2012; UNFCCC, 2014, 2015b).

According to UN-REDD forest communities will receive payments in form of carbon credits and are expected to pursue other forms of livelihood away from deforestation and forest degradation activities (UN-REDD, 2009). On the other hand, developed countries are expected to provide incentives to countries that fulfill the set global guidelines as determined by the conference of parties.

The participating countries according to the UNFCCC guidelines would start accessing these financial rewards upon fulfilling all requirements set in the three phases of REDD+ (Angelsen *et al.*, 2013; Tegegne *et al.*, 2016). Internationally set guidelines require for example that a country produce a national REDD+ strategy. It is further expected to determine its national reference levels; establish a robust monitoring, reporting and verification mechanism; and, establishes a national or indeed local legal framework that supports REDD+ activities before it can begin benefiting from global incentives (Sullivan, 2011; Kissinger, Herold and De Sy, 2012; Pettenella and Brotto, 2012; Karsenty, Vogel and Castell, 2014). All these requirements must meet internationally accepted guidelines (Sullivan, 2011; Kissinger, Herold and De Sy, 2012; Pettenella and Brotto, 2012; Karsenty, Vogel and Castell, 2014).

The initial debate around the idea of using incentives was on how pricing for ecosystems was going to be arrived at. For example, Brazil advocated for direct payments to forest

nations for protection of tropical forests (Angelsen *et al.*, 2013; Reutemann, Engel and Pareja, 2016) while others proposed assigning a value to units of forests based on their ability to store carbon (Strassburg *et al.*, 2009; Müller *et al.*, 2013). The idea behind the later proposal was that the units could then be traded on the carbon credit market (Visseren-Hamakers and Vijge, 2012; van Rooij *et al.*, 2013).

But serious questions about whether the use of incentives or indeed carbon markets was the best way to address deforestation have emerged (Sullivan, 2011; Visseren-Hamakers and Vijge, 2012; Pasgaard *et al.*, 2016). Others have questioned the poor governance systems in a developing country and whether incentives would navigate such challenges (Evans, Murphy and de Jong, 2014; Korhonen-Kurki *et al.*, 2014; Cavanagh, Vedeld and Trædal, 2015). Another body of literature has discussed the sharing mechanism for these incentives arguing for the vulnerable communities. Critical questions about justice, scale, and sustainability of the financial flows have been raised (Okereke and Dooley, 2010; Lyster, 2011a; Karsenty, Vogel and Castell, 2014).

Other researchers have raised concern around the possibility of the incentive fuelling even more destruction to the forests if not well designed and implemented. For example, Sunderlin et al. (2014) noted that during a REDD+ preparation phase in Tanzania, the implementers were avoiding telling the communities about the benefits that REDD+ would bring for fear that, if the money did not eventually come, the people would become more destructive to forests, in frustration.

While these debates about the outlook of REDD+ and the incentive structure are going on, there is positive movement in terms of interest to provide finances for the development of national strategies and action plans for REDD+. For example, a coalition of three Countries: Norway- Germany- and the United Kingdom announced a USD300 million REDD+ programme for Colombia focussing on agriculture led deforestation few days before the Paris climate change conference in 2015 (GCP, IPAM, FFI, 2014; FCPF, 2015). Fresh pledges have also been made despite the many challenges and uncertainties surrounding REDD+ and its potential to meet its central objective.

This thesis pays attention to this aspect of REDD+ seeking to understand how incentives will help navigate local socioeconomic and political interests surrounding drivers of deforestation and forest degradation in some developing country parties. Further interest in this thesis is on the question of sustainability, amounts of incentives and the sharing mechanism for the incentives and how these propose to deal with the ever-growing demand for wood energy in most developing countries.

2.4 REDD+ at National and Local Level

Several writers on the governance of REDD+ have focused on the structure of governance that could be implemented at the local developing country level to ensure maximum local benefit and overall attainment of REDD objectives (Olander *et al.*, 2011; Angelsen *et al.*, 2012; Deheza and Bellassen, 2012; Visseren-Hamakers and Vijge, 2012; Moeliono *et al.*, 2014; Vijge *et al.*, 2016). For example, Forsyth (2009) proposes that REDD+ takes a multilevel, multi-actor and participatory governance structure that allows stakeholders to formulate and implement the policy. He proposes a structure that horizontally brings together institutions and individuals of equal influence and at the same time vertically brings institutions and groups of different influence to negotiate, develop and implement REDD+ (Forsyth, 2009) and achieve the intended objectives.

Others have focused on how REDD+ influences or how it will interact with already existing forest governance systems in implementing developing countries (Phelps *et al.*, 2010; Thompson, Baruah and Carr, 2011b; Aquino and Guay, 2013; Duchelle *et al.*, 2014; Koch, 2016a). Kanowski et al. (2011), for example, was interested in exploring ways in which REDD+ could draw lessons from past forest certification programmes as well as PES schemes, which he argues was the most likely way REDD could deliver positive outcomes for both forests and local stakeholders. Phelps et al. (2010) were however interested in understanding whether REDD+ would lead to recentralizing forest governance or not. They submit that for the past 25years, developing countries had transitioned toward decentralized forest management that allowed local actors increased rights and responsibilities, but a REDD+ approach was poised to interrupt this trend. After analyzing 34 nationally appropriate mitigation actions submitted by developing countries, Phelps el. al (2010) found that 12 countries had submitted centrally managed forest-based mitigation

and never mentioned decentralization. They contend that concrete incentives were key in pushing for decentralization and community participation in forest management.

Two main local governance structures have been proposed for REDD+: The first one is the subnational project approach and the second one is the nested approach (Olander *et al.*, 2011; Visseren-Hamakers and Vijge, 2012; Rantala and Di Gregorio, 2014). Under the sub-national or project-based approach, REDD+ activities are expected to be managed in small independent projects mostly financed by private entities or non-governmental organizations (Olander *et al.*, 2011; Kissinger, Herold and De Sy, 2012; Visseren-Hamakers and Vijge, 2012; Korhonen-Kurki *et al.*, 2014; Rantala and Di Gregorio, 2014). The nested approach, on the other hand, is seen as a hybrid of the sub-national and the national crediting approach (Rantala and Di Gregorio, 2014). It is a governance and incentive system that is expected to bring together REDD+ activities and incentives to reduce emissions levels (Wertz-kanounnikoff, et al. 2008; Parker et al. 2009).

There is a general preference from many REDD+ actors for countries to use the nested approach because by design the approach may offer indigenous peoples and local communities opportunities to secure support for their own proposals to manage the forests and receive payments in countries where corruption and bad governance hindered community access to government support programmes (Griffiths, 2008; Olander *et al.*, 2011).

2.4.1 Challenges that National REDD+ Faces

i. Leakage in REDD+

There are studies focussed on addressing leakage when implementing REDD+ programmes (Sullivan, 2011; Kissinger, Herold and De Sy, 2012; Pettenella and Brotto, 2012; Karsenty, Vogel and Castell, 2014). Leakage refers to the resultant increase in emissions in one geographical location following the implementation of a mitigation project in another area (Wertz-kanounnikoff; *et al.*, 2008; Henders and Ostwald, 2012). It occurs when efforts to control emissions in one place cause emissions to shift to another place that is not subject to the project (Murray, 2008). Murray further says that the potential

for leakage arises when rules, regulations, and incentives for action affect only part of the potential participants to the exclusion of others.

In much of scholarly and development literature, leakage is discussed under two categories i) primary leakages or activity shifting and ii) Secondary leakages, which are dependent on markets and roles played by third-party REDD+ actors (Wertz-kanounnikoff; *et al.*, 2008; Henders and Ostwald, 2012).

According to CIFOR, (2008) shifts in demand for land is likely to be the dominant leakage force for REDD+ mitigation activities. They argue that deforestation was primarily caused by converting land to agricultural and that closing agricultural borderline would eventually create land shortage (Wertz-kanounnikoff; *et al.*, 2008). They further argue that conservation tended to be less labor intensive per hectare than most converted land use, a situation which may lead to out-migration and relocating of greenhouse gas emissions.

There are suggestions on how leakage in REDD+ could be addressed. Kanounnikof et al. (2008), suggests that monitoring; the increasing scale of REDD+ activities; discounting; neutralizing activities; and redesigning of local REDD+ would help address leakages.

On monitoring, they suggest that looking at historical deforestation figures and comparing them with trends was vital in informing intervention for addressing leakage. Further, selection of control areas outside project areas and monitoring local socioeconomic trends outside the project site could help provide an understanding and measurements of impacts of the project (Bofin *et al.*, 2011; Watson *et al.*, 2013; OECD, 2015).

Another way to address leakage, according to Kanounnikof et al. (2008), was to increase the scale of REDD+ activities from subnational to national levels. The argument here is that because of the higher accounting and crediting scales that came with a shift from subnational to national levels scaling up would result in better control of leakage as more would benefit from the incentives.

Discounting, neutralizing of activities and redesigning of the REDD+ project are other suggested interventions for addressing leakage. In direct reference to discounting of REDD benefits; Murrey (2008) argues that as long as countries participation remained below a

certain limit, there was going to be needed to discount these benefits for non-permanence as well as for their estimated international leakage.

Redesigning, on the other hand, is focussed on how REDD+ national and local projects shape up and how size affect their subsequent implementation. The fundamental question that this intervention would ask is: how would focus, location, and incentives of the proposed action affect leakage control? They argue that the careful balancing of these aspects (focus, incentives & location), can help control leakage (Murray, 2008; Wertz-kanounnikoff; *et al.*, 2008).

i. Safeguards: Protecting the rights of Indigenous People

REDD+ programmes seem to face uncertainties as to whether they will attain the intended objectives of reducing emissions from forests. Questions have also emerged on (i) designing or framing of a participatory model that will be inclusive (ii) dealing with land tenure challenges (iii) influencing policy reforms (iv) establishing of a sustainable financing regimes, and (v) ensuring that there is social justice in the process (Okereke and Schroeder, 2009; Okereke and Dooley, 2010; Duchelle *et al.*, 2014; Paudel, Vedeld and Khatri, 2015).

The REDD+ mechanism is set out as a programme that could achieve a reduction in greenhouse gases while at the same time bring about sustainable development and increase benefits for the Indigenous Peoples (IP) and local communities in developing countries (UN-REDD, 2008). There is a push for a REDD+ that secures and enhances the rights of indigenous people to access resources and participate in the REDD+ activities. The UN report on the indigenous people's right, for example, highlighted some of the particularly important challenges that REDD+ must deal with:

a) Possible violation of customary land rights;
b) Increased political marginalization of indigenous people;
c) Denial of rights to participate in financial benefits from REDD+;
d) Inability to participate effectively due to lack of information;
e) Exploitative carbon contacts;
f) Money directed to fraudulent participants;

g) Decreased local food production, loss of livelihood and threat to food security;
h) Increased tension between indigenous people and the government.

(UN-REDD 2008)

The Cancun agreement recognized that implementing REDD+ was going to affect the rights of indigenous peoples and local communities in terms of access to resources as well as reshaping their form of livelihoods (Feiring, 2013; The World Bank, 2014; Wallbott, 2014). The UNFCCC through its Conference of Parties, therefore, developed guidelines for ensuring the protection of rights of vulnerable people when implementing REDD+ programmes. Participating must develop safeguards in REDD+ activities as part of the global requirement for an internationally accepted REDD+ programme.

A body of scholarly literature has emerged advocating for what is called right based approaches for REDD, with a focus on securing rights and justice for indigenous peoples and local communities participating in REDD+ activities (Wertz-kanounnikoff; *et al.*, 2008; Lyster, 2011a; Kissinger, Herold and De Sy, 2012; Angelsen *et al.*, 2013; Mahanty and McDermott, 2013). They argue that REDD+ activities must ensure that the rights of forest people are respected and form part of the integral portion of efforts to tackle deforestation and forest degradation (Lyster, 2011a). The supporting argument behind this claim is that indigenous peoples depend and have been the main defenders of forests. They contend that the success or failure of REDD+ programme will largely depend on how rights of indigenous peoples are respected in the design and implementation of REDD+ strategies (Lyster, 2011a; Mahanty and McDermott, 2013; FCPF, 2015).

However, the questions of how to design a REDD+ framework that assures the protection of indigenous people's rights to access resources seem not to have been addressed. For example, the FCFP (2014) report on safeguards noted that the programme had been marked, since inception, by controversy over the focus on carbon, and the potential for it to be used for forest carbon trading while ignoring other social and environmental values of forests'. This observation, on one hand, seems to suggest that REDD+ has a design and focus problem which unless checked makes it difficult to ensure protection and respect for indigenous people (Sunderlin et al. 2014).

There are some case examples of REDD+ projects that have been implemented that show that there are significant challenges in capturing and protecting the rights of the forest communities when implementing REDD+. The case of Indonesia, Tanzania and Congo DR, for example, showed that REDD+ was creating a class system in which only the powerful and few where benefiting to the exclusion of the poor and weaker groups (Sunderlin *et al.*, 2014; Sunderlin, Ekaputri and Sills, 2014; Heinrich *et al.*, 2015). According to the report, poor forest governance; rushed preparation process; ignoring of land tenure rights and; the promise of financial payments/incentives for REDD+ undermining reforms; were some of the main reasons it was difficult to secure rights of indigenous people.

This thesis looks at this issue from a political and economic point of view. It asks questions about the conflict of interest, power, and poverty that were behind most of the drivers of deforestation in countries like Zambia and how then the incentives would address those interests to ensure a sustained shift of livelihood and subsequent protection of forests. This approach is critical as it not only looks at what the international REDD+ was promising but assesses those promises against choices and interests of the local people and participating countries to get a clear understanding of what a future REDD+ was up against.

ii. Participation Dynamics

Decision 1 CP/16-part C of the UNFCCC conference of parties affirms the need to promote what it calls broad-based participation in designing and implementing of REDD+ programmes. It emphasizes that developing country parties ensure the full and effective participation of all relevant stakeholders' especially indigenous people and local communities (Redd, 2013).

The focus of literature on participation and REDD+ has been more on getting the REDD+ governance framework that allows for as much voices of indigenous people and local communities to be heard and respected through the REDD+ project cycle (Thompson, Baruah and Carr, 2011b; Chhatre *et al.*, 2012; Redd, 2013; Brockhaus, Gregorio and Carmenta, 2014; Paudel, Vedeld and Khatri, 2015). Scholars try to answer the question of how interests of these forest people, women, and children, as well as other marginalized

groups, were being aligned in order to bring the desired environmental as well as social economic outcome (Thompson, Baruah and Carr, 2011b; Chhatre *et al.*, 2012; Redd, 2013; Brockhaus, Gregorio and Carmenta, 2014; Paudel, Vedeld and Khatri, 2015). The advocates for a participatory approach to REDD+ seek strategies that create a framework of engagement and flow of information amongst stakeholders for REDD+ to work (Rubio et.al, 2012; FPP, 2014).

There is a body of literature that seems to suggest that REDD+ projects faced a lot of challenges in getting the right framework for successful and broad-based participation, mostly because of the way the global REDD+ governance was designed. For example, Phelps et al. (2010) observed that local institutional requirements set at the global REDD+ platform, presented real possibilities of recentralizing forest governance, a situation that would then undermine participation of indigenous people and local communities in project design as well as management. They argue that while communities would or may participate in collecting forest-specific data, they were not likely to participate in the highly technical aspects of monitoring, reporting and verification and or in handling of huge sums of money that would come from Carbon Credits (Thompson, Baruah and Carr, 2011b; Chhatre *et al.*, 2012; Redd, 2013; Brockhaus, Gregorio and Carmenta, 2014; Paudel, Vedeld and Khatri, 2015). These technical aspects are the justifying tools for pushing for re-centralization of forest governance because the government would claim that only they had the knowledge and capabilities to handle such complex matters (Paudel, Vedeld and Khatri, 2015).

iii. Uncertainties in Source and Flow of Finances

Financing REDD+ is a highly-contested issue both in scholarly and development literature. Questions of the source, sustainability, and amounts have dominated these discussions (Angelsen 2009; Aquino & Guay 2013; Dunlop & Corbera 2016). The Eliasch Review, (2008), estimated that there was a need to invest between US$17- US$33 billion annually to half greenhouse gas emissions from the forest sector by 2030. The UNFCCC decision 1/CP 16 on the other hand, urges developed countries to provide funds to developing countries for the preparation and implementation of REDD+ activities. These countries are expected to do this either through bilateral or multilateral channels or a combination of

both (OECD, 2011; UNFCCC, 2014). The rationale behind this is to motivate developing countries to work towards improving forest governance as well as ensuring that there was adherence to the internationally set guidelines on implementing REDD (Angelsen 2009; Aquino & Guay 2013; Dunlop & Corbera 2016).

There are currently over 21 developed countries that have volunteered to provide financial support for REDD+ readiness activities. Norway has been the leader in providing finance through both multilateral and bilateral institutions. In 2014, Norway, the United Kingdom, and Germany came together to established a three-nation financing regime to finance REDD+ strategies and related readiness activities in developing countries (Germany, Norway and the United Kingdom 2014; Corbera & Schroeder 2011b).

Between 2006 and 2014, aggregate pledges for REDD+ finance stood at US$9.8 billion, with over 90 per cent coming from the public sector with Norway, Germany, Japan and the United Kingdom providing 77 per cent of the pledged amounts.

Brazil and Indonesia have been the major recipient sharing 35 per cent of the REDD+ funds and only 17 per cent going towards REDD+ support programmes across 75 recipient countries. About 20 per cent went towards global REDD+ programmes (ODI, 2015).

Presently two streams of finance exist under REDD+: i) financing to support preparation or readiness activities and ii) performance-based finance. While there has been a lot of movement in the readiness finance, there are still debates around the source, sustainability and or mode of providing finance under the performance-based stream (Minang, Van Noordwijk, L. A. Duguma, *et al.*, 2014).

There seem to be contradictions in the way various groups, organizations or states would want to see REDD+ financed. There are scholars who have challenged the neo-liberal ideas of using carbon markets to address climate change on the basis that they perpetuate capitalist trends and fail to radically push for carts in industrial carbon emissions (Okereke and Dooley, 2010; Lyster, 2011a; Karsenty, Vogel and Castell, 2014). This group has focussed on challenging the idea of using incentives in REDD+, arguing that such an approach would be both unsustainable and unfair to many other stakeholders on the ground. Countries like Brazil, for example, have consistently opposed the idea of having REDD+

policies that would be used to offset emissions from Annex 1 countries or industrialized countries (Cadman *et al.*, 2016). They felt that market mechanisms were mixed with technical, fairness and sustainability problems that needed an overhaul for them to be effective. Thus Brazil's view was that REDD+ be financed through an international mechanism that did not include offsets.

But the Coalition for Rainforest Nations (CfRN), on the other hand, has been advocating for a flexible financing mechanism that was linked to the international markets (Cadman *et al.*, 2016). They push for a market mixed approach where funding was raised through auctions to finance REDD+ activities. The social justice advocates; development NGOs and other social scientists have been advocating for a fund based or non-market approach as the starting point for REDD+ financing (UNDP-MDTF, 2011; Cadman *et al.*, 2016). The argument here is that this approach can create incentives for maintaining large stocks of existing forests and help implementing countries prepare for the market-based approach.

There is a reason, therefore, to believe from these debates that the future of REDD+ finance is still not very clear. There has been no legally binding agreement on financing the REDD+ programme even after the Paris agreement (Wibowo and Giessen, 2015; Cadman *et al.*, 2016; Vijge *et al.*, 2016). The lack of a binding financial regime for REDD+ thus spells challenges both for the design of national strategies as well as getting the political interests from participating countries to commit to REDD+ (Cadman *et al.*, 2016).

This thesis, therefore, has taken interest into the financial issues because it is one of the greatest determinants of whether REDD+ will succeed or not, especially since REDD+ was designed to work as an incentive-based mechanism (Strassburg *et al.*, 2009; Sunderlin, Ekaputri and Sills, 2014).

2.5 REDD+ in Zambia

2.5.1 Forest Governance in Zambia

Forests in Zambia take up over 60% of the total land mass providing over 39 per cent of direct and indirect jobs in the country (Mwitwa *et al.*, 2012; Kalinda *et al.*, 2013; Leventon *et al.*, 2014; Turpie, Warr and Ingram, 2015; Kalaba, 2016; Shane and Gheewala, 2016). Governing the forest resources has been a complex challenge both in terms of institutional

design as well as legal frameworks. The mixed land tenure systems, as well as lack of resources to implement natural resource policies, are among key factors negatively affecting resource management in Zambia.

This section, therefore, presents an account of the forest governance system and challenges in Zambia.

2.5.2 Legislation and policies for forest management in Zambia

For a long time, Zambia had relied on the 1973 forest Act that drew most of its ideas from the way the British colonial administration managed forests (ECZ, 2008; GRZ, 2011b; Kalaba, Quinn and Dougill, 2013). The Act promoted a centralized forest and natural resource management system that excluded the active participation of civil society and the local communities in governance and benefit sharing of the natural resources (Hervey, 2012; Kamelarczyk and Smith-Hall, 2014; Leventon *et al.*, 2014).

Policy and legal reforms in the forest sector in Zambia ushered in a new forest bill and policy that encouraged the participation of non-state actors such as the private sector, NGO's, and local communities in forest governance (Hervey, 2012; Mwitwa *et al.*, 2012; Kamelarczyk and Smith-Hall, 2014; Leventon *et al.*, 2014). Despite this initial effort having the right intention, forest management in Zambia remained largely centralized with low levels of participation from local communities and the NGO's (Thompson, Baruah and Carr, 2011a; Vinya *et al.*, 2011; Banda and Bass, 2014). In 2015, a new Forest Act was enacted with the aim of enhancing joint forest management efforts and increasing stakeholder's participation in management and benefit sharing of the natural resources (Kalaba, 2016; Pilli-Sihvola and Väätäinen-Chimpuku, 2016). The Act also aims to smoothen the interaction between various government ministries and departments in the management of forest resources (Kalaba, 2016).

2.5.3 Actors in Forest Management in Zambia

i. The Forest Department

The Forest Department is the main institution charged with the responsibility to manage forests in Zambia (Fumpa-Makano, 2011; Attafuah, Kasaro and Fox, 2014; Ratnasingam, 2015a). The department is under the ministry of Land Natural Resources and

Environmental Protection. Its main purpose is to ensure sustainable utilization of timber and non-timber forest products and services and ensuring protection and maintenance of biodiversity for the benefit of present and future generations (Vinya *et al.*, 2011; Kamelarczyk and Smith-Hall, 2014). In this line, the department is expected to develop forest management plans and enforce the Forestry Act and policies as developed by the central government. The forestry department also provides advice to the central government on forest management and conservation issues in the country (Vinya *et al.*, 2011; Chishimba, Chundama and Akakandelwa, 2013; Müller *et al.*, 2013).

In the past decades, Zambia through the forestry department has put in place policies and legislation aimed at decentralizing natural resource management responsibilities to include other stakeholders such as NGOs, and the local communities (Vinya *et al.*, 2011; Day *et al.*, 2014; Kalaba, 2016). The push for a decentralized forest management system has largely been driven by government's realization of the failure of the centralized system in advancing sustainable forest management as well as from international pressure for decentralized forest governance regimes. It is also because of government's realization of it's inadequate financial, personal and administrative capacity to manage the vast forests of the country (Vinya *et al.*, 2011; Day *et al.*, 2014; Kalaba, 2016).

ii. Zambia Environmental Management Agency

The other important institution in the management of forests in Zambia is the Zambia environmental management agency (ZEMA). The agency was established through an acting parliament, to provide oversight on all environmental issues across sectors in the country including forests (GRZ, 2011a). Its primary objective is in twofold; pollution control and environmental management planning (GRZ, 2011a). The institution further provides in consultation with the forest department, advice to the central government, on international environmental policies and treaties. The environmental management act of 2011 mandates ZEMA to prepare national environmental management plans every ten years. As a regulator, ZEMA also oversees the Environmental Impact Assessment processes for all projects and investments with a likely impact on the social-economic and the environment (GRZ, 2011a).

iii. The Local Authorities

Local authorities are principle institutions with the mandate of providing governance at the district level (GRZ, 1995). They have both the political, legal and professional structures that empower them to work with the forest department and the Zambia environmental management agency in the protection and management of forests. Because of their presence in all the districts of the country, local authorities are a significant stakeholder in the management of forests and enforcement of the forest policies and laws. The local authorities are also empowered to develop bylaws and develop plans suitable for their local context, which gives them a very important role in enforcement and general forest protection of the natural resources (GRZ, 1995).

iv. Traditional Authorities

Traditional authorities are the oldest existing institutions of governance in Zambia and most of Africa. Historically, traditional leaders have relied on unwritten policies and rules in the governing of natural resources (Cheveau *et al.,* 2008). Because of the respect which is given to them by their subjects, these traditional establishments have been able to influence local utilization as well as protection of the forests and related natural resources (GRZ, 2015a). In Zambia, traditional authorities, are now identified as important stakeholders in the administration and general management of natural resources (Forsyth, 2009; Kalaba, 2013). This is mainly because they hold customary land administration over huge pieces of land across the country. In the Joint Forest Management designs for Zambia, traditional leaders are among the important stakeholders that together with the forest department must approve implementation of any JFM project before it takes place within their territory (ECZ, 2008; Kalaba, Quinn and Dougill, 2013).

v. Other Government Ministries/ Departments

Other government ministries and departments fit and play active and significant roles in the governance of forests in Zambia (ECZ, 2008; Kalaba, Quinn and Dougill, 2013). Some of these include the ministry of agriculture, the Zambia wildlife authority, the ministry of tourism, the ministry of energy and water development and the disaster management unit. The Forestry Act of 2015 and various other legislation-governing operations of these

different ministries and departments recognize the roles and functions of these stakeholders in the management of forests in Zambia (GRZ, 2011a, 2015a). Of mention is the Environmental Management Act of 2011, which requires the development of national management plans that integrate or bring together all stakeholder functions in the management and governance of the environment and land (GRZ, 2011a).

vi. Civil Societies and Other Stakeholders

The focus of reforms in Zambia's forest sector has been to develop a decentralized framework that encourages participation of various stakeholders in the management of natural resources (Kalaba *et al.*, 2013; den Besten, Arts and Verkooijen, 2014; GRZ, 2015a). International and local civil society organizations thus played a big role in both the framing of the policy and pieces of legislation as well as in the implementation of various forest management initiatives (FIP and UN-REDD, 2016).

International NGOs, bilateral and multilateral institutions have been very instrumental in providing both financial and technical support to Zambia's effort in natural resource management (Chishimba, Chundama and Akakandelwa, 2013; Kalinda *et al.*, 2013; Day *et al.*, 2014; FIP and UN-REDD, 2016). The table below presents a list of some of the key local and international players in the management of natural resources in Zambia:

Table 1: Key non-state Organisations Participating in Natural Resource Governance in Zambia

Name of Organisation	**Key Contribution/ Area of Focus**
USAID, DfID, FINIDA, SIDA	Providing financing and technical support to state departments, academia and civil society organization in environmental governance
UN Agencies (FAO, UNEP, UNDP); World Bank; IMF; European Bank	Finance and providing technical and professional guidance to government institutions particularly on international treaties and global environmental concern
Wildlife and Conservation Society in Zambia	Focus on conservation and community participation in the protection of wildlife
Zambia Institute of Environmental Management	Contributes to research as well as dissemination of knowledge on the environment across the country
Citizens for a Better Environment	Contributes to community mobilization and environmental project implementation. Focuses on community education and sensitization on key environmental issues

Zambia Climate Change Network	Contributes to research as well as dissemination of knowledge on the environment across the country. Coordinates other organization doing projects and studies on climate change and environmental related issues
CBNRM	Emphasizes local participation of local communities in natural resources management as well as benefit sharing.
Academia & Media	Provide research, consultancy and dissemination of environmental issues and programmes

2.5.4 Forest Governance Initiatives in Zambia

Zambia like many other developing countries has been making various attempts aimed at improving the governance of forests and natural resources (Hervey, 2012; Mwitwa *et al.*, 2012; Leventon *et al.*, 2014, 2014; Koch, 2016b). They include legal and policy reforms as well as institutional and technical reforms (Hervey, 2012; Mwitwa *et al.*, 2012). These efforts are driven by the changes in the global natural resources and environmental governance regimes that are calling for decentralized forest governance (Cadman and Maraseni, 2012b; Atela, 2013; van Rooij *et al.*, 2013; Brockhaus, Gregorio and Carmenta, 2014; Certomà, Corsini and Rizzi, 2015). The fundamental argument for a decentralized natural management system is that it has potential to improve the sustainability of natural resources and enhance the welfare of rural communities (Kanowski, McDermott and Cashore, 2011b; UNEP, 2011; Hervey, 2012). In the same line, various concepts such as the community-based natural resource management (CBNRM), participation forestry management (PFM) and Joint Forestry Management (JFM), were developed to signal the shift from failed colonial centralised top-down natural resource management (NRM) systems(A. Angelsen, 2009; Bofin *et al.*, 2011; Koch, 2016b).

The main themes that have emerged in these programmes include among others: participation, benefit sharing, decentralization, ownership, land tenure, indigenous people's rights, sustainability and governance (Koch 2016b; A. Angelsen 2009; Bofin et al. 2011; Levenson et al. 2014; Hervey 2012; Vinya et al. 2011). Table 2 below shows some of the programmes and initiatives that Zambia has been implementing in line with changing global trends:

Table 2: Past and On-going Initiatives in Forest Governance in Zambia

Programme/Strategy	Program Status	Description/ aim	Outcome
Joint Forest Management (JFM) *– also implemented in countries like Kenya, Uganda; South Africa, Tanzania, and Sierra Leone*	• Past	• First piloted in 3 provinces: Luapula, Central & Copperbelt • The aim was to facilitate the transfer of ownership and management rights of local forest reserves from central government to local communities • It also aimed at bringing joint management among stakeholders (GRZ and Private Sector)	• Influenced legal reforms in the forest sector in Zambia • The problem in benefit sharing between GRZ and communities • Lack of proper local institutions to encourage participation and apportion benefits • Land tenure issues remain a barrier to improved local participation [1]
The World Conservation Strategy	• Past	• The main aim was to promote sustainable use of natural resources and maintain biological diversity • Establish conservation policies and devise plans to integrate conservation in national social and economic plans	• Failed to reach and integrate local [2] communities in its programmes • Used a top-down approach that only influenced government institutions • Depletion of natural resources went up at a faster rate
Zambia Forestry Action Plan	• Past	• The aim was to focus on reforestation, forest management, forest conservation and forest restoration at the national level • The aim was to overcome political and institutional barriers to effective natural resource management	• It remained a sector within the department of forestry • Centralized project with little impact on the ground • Failed to link with the grassroots forest management program • Lacked adequate government support
Integrate Land Use Act 1	• Past	• The aim of ILUA 1 was to generate forest baseline data for the entire country • To pave way for the better forest management and use of natural resources	• Baseline data has been provided but the exercise was criticized for its lack of toughness • Few numbers of samples

[1] Bwalya M. S (2004) Rural livelihoods and Collective action in JFM in Zambia. ….

ILUA 2	• On-going	• The aim of ILUA2 is to use the baseline data obtained in ILUA 1in enhancing sustainable forest management (SFM) • It also aims to enhance multi-sector dialogue and dissemination of information as well as capacity building for REDD+	• Expected to provide more representative data due to the increased number of samples • Expected to provide adequate background for REDD+

2.5.5 Deforestation and Forest Degradation in Zambia: What Drives It?

Most studies conducted in Zambia do not make clear distinction on what is meant or classified as deforestation and what constitutes forest degradation (Summary, 2009; Vinya *et al.*, 2011; Kamelarczyk and Smith-Hall, 2014; Tembo, Mulenga and Sitko, 2015; Wehkamp, André Aquino, *et al.*, 2015; Kalaba, 2016; Koch, 2016b). The focus of this section, however, is not to discuss this ambiguity but merely to present the significance and contribution of various anthropogenic activities in driving both deforestation and forest degradation.

Another technical point when discussing drivers of deforestation and forest degradation is in the classification as either proximate (primary driver) or underlying (secondary driver) driver of deforestation. Again, most works, until the coming in of REDD+ in Zambia do not attempt to make these distinctions (Summary, 2009; Vinya *et al.*, 2011; Kamelarczyk and Smith-Hall, 2014; Tembo, Mulenga and Sitko, 2015; Wehkamp, André Aquino, *et al.*, 2015; Kalaba, 2016; Koch, 2016b) but make effort to rank various human activities in terms of contribution to general forest loss in Zambia:

Acceding to Vinya et al, (2011), for example, agriculture and charcoal production, fuelwood collection and settlements were the top four drivers of deforestation in Zambia. They state that other social and economic factors such as poverty, low levels of employment were exacerbating the problem of deforestation in Zambia.

For, Tembo et al. (2015) charcoal and wood fuel production, logging for timber, expansion of small-scale agriculture and unsustainable agricultural practices were the main drivers of deforestation in Zambia. They, however, argue that charcoal and wood-fuel production for industrial purposes and not for domestic cooking was the main driver of deforestation in Zambia. Tembo et al. (2015) further posit that there was an increased demand for charcoal

in urban areas and that the use of this form of energy was likely to continue in Zambia for a long time to come.

Other early studies on deforestation in Zambia, also suggest that charcoal production and agriculture expansion were the main drivers of deforestation and forest degradation in Zambia (Chidumayo, 1987a, 1988; Chidumayo and Kwibisa, 2003). His arguments are that poverty and other economic challenges were the underlying drivers for charcoal led deforestation.

Hervey (2012), however, says that the main drivers of deforestation and forest degradation in Zambia were not economic or demographic (population dynamics) in nature but institutional. He implicates the dual land tenure system of having traditional authority on one hand and state authority on the other as the main reason for failure in containing deforestation and forest degradation (Hervey, 2012). His further argument is that because of this complication, landholders were clearing forests with little regard to long-term sustainability issues. He argues that failure to decentralize forest management because of vested interests and institutional failure had prevented the forest department from implementing progressive forest management policies. This, in turn, is what has resulted in poor regulation and increased levels of deforestation (Hervey, 2012)

2.6 The REDD+ Process in Zambia

Zambia is one of the first nine pilot developing countries that were selected under the United Nationals Collaborative Programmes on Reducing Emissions from Deforestation and Forest Degradation (UN-REDD+). The country was selected for two reasons: its higher rate of deforestation and because it is a tropical developing country. In 2009, a total of 4.5 million United States dollars was provided to Zambia for the UN-REDD readiness quick start programme. One of the expected outputs of the readiness phase was to develop a National REDD+ strategy. The process of developing the National REDD+ Strategy in Zambia involved building the capacity of relevant stakeholders as well as reviewing past efforts in forest management that have relevance to REDD+. It also involved undertaking studies of drivers of deforestation and forest degradation. One of the main identified projects relevant for REDD+ is the Integrated Land Use Assessment (ILUA) project.

The Zambian government has since established a climate change secretariat involving key ministries of land, energy, and environment to oversee the climate change programmes including REDD+. The country coordinator appointed from the department of forestry oversees the national coordination of REDD+ activities. The United Nations Development Program (UNDP); the Food and Agriculture Organisation (FAO); The United Nations Environment Programme (UNEP) and other international institutions like CIFOR and USAID have been providing technical and financial support in the design and localization of REDD+ in Zambia. It is envisaged, that once fully operational REDD+ will help achieve the much-needed reduction in deforestation and forest degradation in Zambia and further support the countries sustainable development ambitions. It is this aspect that this study is evaluating to ascertain whether in its framing REDD+ would attain its central objective. Zambia thus made a good case of analysis. Subsequent chapters provide an in-depth critique of the programme giving empirical findings on the prospects of REDD+ achieving its objectives. Localizing UN-REDD+ In Zambia

The UN collaborative agencies (FAO, UNEP, and UNDP), provide technical and financial support for information dissemination, stakeholder capacity building on REDD+ as well as general guidance on global requirements for REDD. The aim is to help the country prepare for future participation in the UNFCCC designed REDD+ mechanism (UN-REDD, 2008, 2009b; UN-REDD Programme, 2010).

In 2010, Zambia was selected among the first nine countries to pilot REDD+ programmes through a quick start programme (Day *et al.*, 2014; Chirambo, 2015; FIP and UN-REDD, 2016). The quick start programme was expected to deliver on four aspects:

i. To help build national capacity on handling REDD+;
ii. To address forest governance issues such as policies and institutional challenges in forest governance and;
iii. To establish a Monitoring Review and Verification (MRV);
iv. To assess and establish national reference emission levels (REL);
v. To develop a National REDD+ strategy or action plan for Zambia (UN-REDD, 2009b; Day *et al.*, 2014).

2.6.1 Financing REDD+ Process in Zambia

The three UN-REDD+ collaborating agencies (FAO, UNEP, UNDP) provided funding for the quick start REDD+ programme in Zambia (Green and Papers, 2014; FCPF, 2015; FIP and UN-REDD, 2016). In the first phase, USD$ 4.49 million dollars was released for the preparation activities. The activities included the following: i) assessing and analyzing direct and indirect drivers of deforestation and forest degradation in Zambia; ii) formulating a stakeholder engagement plan. iii) assessment of previous, on-going and planned forest management activities; iv) assessing financing, incentives, and benefit sharing options for REDD+; v) assessing the role of safeguards in REDD+; vi) enhancing private sector engagement in REDD+; and viii) Assessment of REDD+ institutional capacity and capacity needs (Green and Papers, 2014; FCPF, 2015; FIP and UN-REDD, 2016).

The implementation of these activities was planned to take three years (2010-2013) at which point the national REDD+ strategy was expected to be completed (Vinya *et al.*, 2011; Attafuah, Kasaro and Fox, 2014; UN-REDD, 2015). However, the process in Zambia was delayed for one reason or another. The completion of the REDD+ national strategy only took place in 2015, two years beyond the projected end date (Attafuah, Kasaro and Fox, 2014; FIP and UN-REDD, 2016).

In July of 2016, a mission to support the government of Zambia in developing of Zambia's National REDD+ strategy investment plan (REDD+-IP) took place (FIP and UN-REDD, 2016). The mission team comprised the three UN-REDD+ agencies; the multilateral banks, which included the World Bank; the African development bank and the international finance cooperation. These institutions came under the auspices of the forestry investment programme (FIP). Other institutions that joined the mission is The Nature Conservation (TNC), which has been involved in REDD+ activities in Zambia for a long time (FIP and UN-REDD, 2016).

From the mission's report, there is a reason to believe that future REDD+ activities in Zambia, will be dependent on international financing options such as the Forest Investment Plan comprising multilateral banking agencies led by the World Bank. The Green Climate Fund is also another financing option available for the government of Zambia to support

REDD+ activities (FIP and UN-REDD, 2016). The mission report also points out challenges in the flow of finances towards REDD+ activities. The main challenge that was identified was GRZ institutional red tape and sluggish movement in getting things done (FIP and UN-REDD, 2016). To this end, a recommendation to establish a high-level technical committee from key line ministries (Agriculture, Lands, and Wildlife) to ensure strong political buy-in and coordination from the government of Zambia, was given (FIP and UN-REDD, 2016).

There is thus a reason to believe that financing for REDD+ activities in Zambia will be dependent on international financial sources. This will either be through multilateral or bilateral agencies.

2.6.2 Local Institutional Design for REDD+

The national REDD+ coordination unit was established in 2012. The unit comprised four officials from the forest department; officials from the international technical advisory on REDD+; representatives from the civil society organization and representatives from various ministries such as Agriculture, Finance, Justice, and Energy (Attafuah, Kasaro and Fox, 2014; Turpie, Warr and Ingram, 2015; FIP and UN-REDD, 2016). The country REDD+ coordinator, who is recommended from the forestry department, heads the REDD+ Unit situated under the national interim climate change secretariat for Zambia (Attafuah, Kasaro and Fox, 2014; Turpie, Warr and Ingram, 2015; FIP and UN-REDD, 2016). Figure 1 below is the schematic representation of the REDD+ coordination Unit for Zambia.

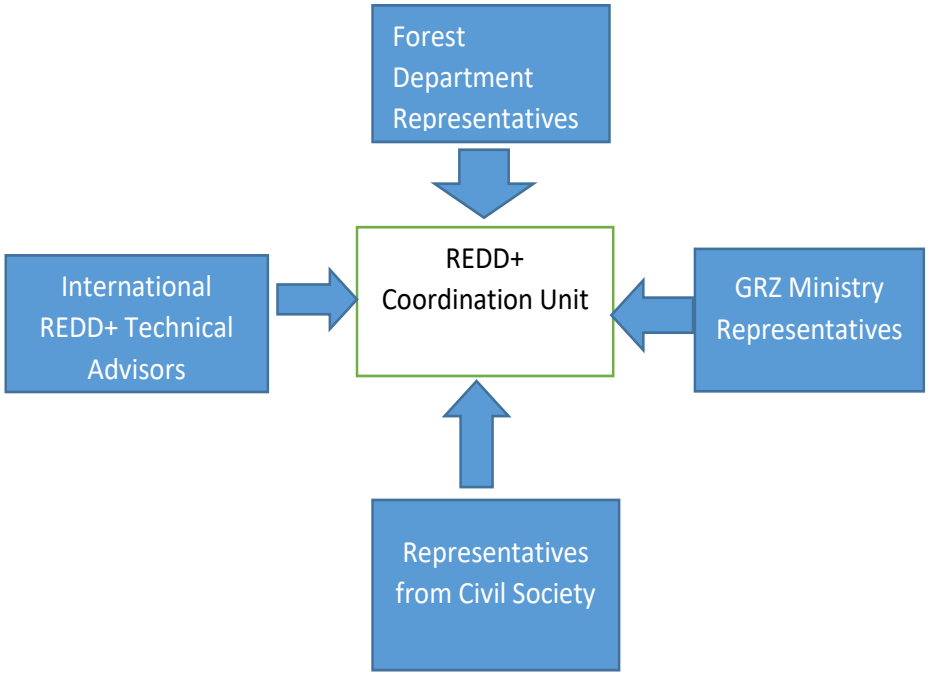

Figure 1: The National REDD+ Coordinating Unit for Zambia

The REDD+ coordinating unit is responsible for organizing REDD+ meeting and coordinating national REDD+ activities for Zambia. It is also responsible for information dissemination as well as organizing training and capacity building workshops on REDD+ (Attafuah, Kasaro and Fox, 2014; Day *et al.*, 2014; Kalaba, 2016).

2.6.3 The National REDD+ strategy for Zambia: Key features

The process leading to the development of the National REDD+ strategy in Zambia started in 2009 and was only completed in 2016 (Ministry of Environment Sweden, 2014; FIP and UN-REDD, 2016). A multi-stakeholder approach involving various stakeholders from the government, the civil society, academia, and international agencies as recommended by the UNFCCC methodologies on REDD, was followed (Attafuah, Kasaro and Fox, 2014).

The REDD+ coordination unit of the forestry department led and coordinated the activities supported by UN-REDD+ agencies that provided financial support and technical guidance. Zambia used a rigorous nine-step approach with the main aim of aligning REDD+ to broader national development plans (Attafuah, Kasaro and Fox, 2014). The stages included developing the background to the REDD+ process in which guiding principles for developing the strategy were agreed among key stakeholders. It further spelled out the

broader vision and need for a coordinated approach to implementing REDD+ (Attafuah, Kasaro and Fox, 2014).

Various studies were conducted in line with the global recommendations and guidelines for implementing REDD+. They included research to understand drivers of deforestation and forest degradation in Zambia; studies on Zambia's' legal preparedness for REDD+; identification of threatened forests, REDD+ co-benefits; opportunity cost and economics of REDD and many others all to inform the structure and focus of the national REDD+ strategy (Vinya *et al.*, 2011; Attafuah, Kasaro and Fox, 2014; Day *et al.*, 2014).

The national REDD+ coordination unit synthesized the strategy with support from various consultants and the UN-REDD+ agencies reflecting most of the findings from the various independent studies. The final REDD+ strategy was compiled and completed in 2015 and awaiting funding to begin implementation.

Figure 2 below shows the various steps that the strategy development process in Zambia took.

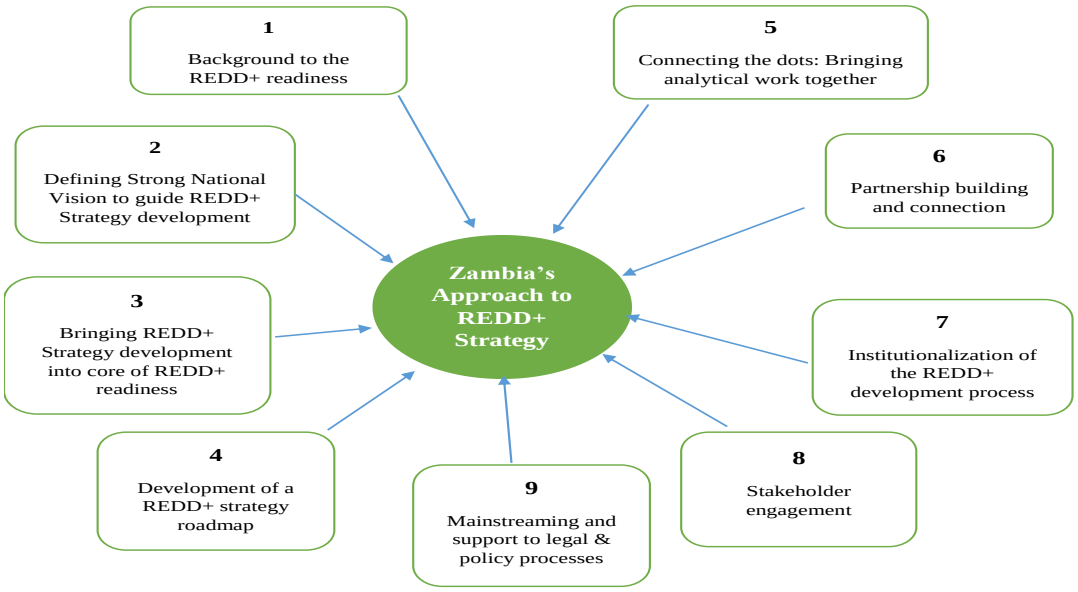

Figure 2: Schematic Presentation of the steps that Zambia took in developing the REDD+ National Strategy (Source Attafuah et al. 2014)

perous climate change-resilient economy by 2030, anchored upon sustainable management and utilization of Zambia's natural resources for improved livelihoods (Attafuah, Kasaro and Fox, 2014; FIP and UN-REDD, 2016). The strategy reflects the country's international and

national commitments to promote REDD+ (Attafuah, Kasaro and Fox, 2014; FIP and UN-REDD, 2016). The goal of the strategy is to contribute to reductions in national greenhouse gas emissions by improving forest and land use management and to ensure equitable sharing of both carbon and non-carbon benefits among stakeholders (Attafuah, Kasaro and Fox, 2014; FIP and UN-REDD, 2016). It also emphasizes the need to bring all REDD+ projects in Zambia under one unit for better national coordination, monitoring, and evaluation (FIP and UN-REDD, 2016).

Further, the national REDD+ strategy focuses on bringing all REDD+ activities under one coordination unit (Kissinger, Herold and De Sy, 2012; Attafuah, Kasaro and Fox, 2014; FIP and UN-REDD, 2016). It emphasizes the landscape approach in which REDD+ activities should be designed to enhance livelihood or land use activities prevailing or suitable to a particular area (Kissinger, Herold and De Sy, 2012; Attafuah, Kasaro and Fox, 2014; Ministry of Environment Sweden, 2014; FIP and UN-REDD, 2016).

Addressing deforestation and forest degradation in key sectors such as forestry, agriculture, energy, mining, and other land-use activities, is also a key feature in the national REDD+ strategy for Zambia. It hopes to achieve this by strengthening inter-agency coordination and participation of all stakeholders in the implementation of the strategic activities (Attafuah, Kasaro and Fox, 2014; FIP and UN-REDD, 2016)

2.7 Chapter Summary

The focus of this chapter was to analyze the various works and debates done on the governance of REDD+, it's financing, and definitions of drivers of deforestation and forest degradation. The chapter was also interested in reflecting various debates and understandings of REDD+ aims and strategic approaches by various actors and the challenges that the policy was facing at the local level. Contemporary literature on the REDD+ discourse reviewed so far shows that there are still technical (financing, institutional structure) and normative (justice, participation etc.) questions that the policy still needed to address for it to be effective. The REDD+ policy faces challenges in terms of how it should be governed locally, how it should be financed as well as other technical

challenges on measurements and determination of amounts to pay for implementing the programme.

Much work on REDD+ governance as explained in the chapter has focussed on the local design questioning who controls, who benefits and participates in the design and implementation of REDD+ at the national level. Others have also focussed on the challenges that REDD+ mechanisms are likely to face in addressing problems of leakage, weak safeguards and poor participation of indigenous people in forest management, that were inherent in the prevailing local governance structures of developing countries.

The review also shows that the REDD+ mechanism has centered on the idea of using incentives both in form of preparatory grants and as performance-based payments with the hope of motivating local communities and governments of developing countries to conserve forests. However, the challenge that remains unresolved in the debates on financing REDD+ is on the source, amount and sustainability of the financial flow. The literature on carbon commodification has challenged this approach as being one of the failed neoliberal approaches that only perpetuate the capitalist ideas of domination and resource control. This thus raises questions about the ability of an incentive-based REDD+ to deliver on its central objectives of reducing greenhouse gases from deforestation and forest degradation.

There is also ambiguity in the definition, classification, and rating of drivers of deforestation and drivers of forest degradation noted in development reports and scholarly literature on REDD+. This has also impacted how the international institutions were responding to the problem as well as their financial areas of priority.

A review of how Zambia as a country was addressing its deforestation shows significant challenges in terms of institutional and financial capacity to address deforestation and forest degradation (Hervey, 2012). This according to, literature is one reason that resulted in the failure of many past policies to help reduce deforestation in the country (Hervey, 2012; Mwitwa *et al.*, 2012; Kalaba, 2016).

But through a UN-REDD+ programme, Zambia is yet again expected to attempt to address its deforestation challenges. The question that needs to be answered then is: to what extent

can this incentive-based REDD+ approach, help to address the drivers of deforestation and forest degradation and help in the reduction of global greenhouse gas emissions in Zambia?

The subsequent chapters of this thesis attempt to answer this question using a Neo-Gramscian Political Economy perspective that not only, interrogates the historical and structural issues of the policy but also the underlying political and economic interest and power embedded in framing and governance structure of the REDD+ policy.

3 CHAPTER THREE: CRITICAL, POLITICAL ECONOMY THEORY & REDD+

3.1 Introduction

This research uses neo-Gramsci theory to analyze the development, domestication, and implementation of REDD+ as a global instrument for addressing deforestation and forest degradation. The neo-Gramscian lens is particularly appropriate for its strength to analyze power influences in complex political and economic contestations involving multiple actors. Neo-Gramscian political economy perspectives are 'critical' in that they do not only seek to explain the world order or prevailing approaches but go further to engage with the question of why things are the way they are and to suggest alternative approaches to addressing the issue under examination. The chapter introduces neo-Gramsci theory as an approach that is rooted in the broad political economy theory. It then explains the theory of neo-Gramsci in greater detail including key concepts such as cultural hegemony, historical bloc, and passive revelation and shows how these provide relevant tools for understanding the politics of REDD+ design and implementation at both the global and national levels.

3.2 Critical Political Economy Theory

A theory is critical if it is oriented towards critiquing as well as changing society (Horkheimer and Turetzky, no date; Horkheimer, 2002; Bieler and Morton, 2004; Bradbury-Jones, Taylor and Herber, 2014; Neal and Neal, 2015). Critical theories are different from traditional IR theories, such as realism, liberalism, and constructivism which are oriented only to understanding or explaining society (Cox, 1981; Bieler and Morton, 2004). A critical theory aims to dig beneath the surface of social life and uncover the assumptions that keep society from a full and true understanding of how the world works and therefore make changes that matter (Weber, 2002; Neal and Neal, 2015). Considering the nature of REDD+ policy and its intent to alter not only the way people live their lives but also state policies and developmental interests, a critical theory thus provides the best lens for analyzing such a policy.

The ideas of critical theory go back to the writings of Hege, Kent, Kal Marx and many other Greek philosophers like Nietzsche and Weber (Horkheimer, 2002; Bieler and Morton, 2004). The twentieth century thought and development of critical theory is mainly associated with a distinct Germany sociologist school of thought called the Frankfurt School (Lawler, Burchill and Linklater, 1997; Stevenson, 2013). Some of the renowned sociologists responsible for the development of this theoretical thinking include Max Horkheimer, Theodor Adorno, Walter Benjamin, Herbert Marcuse, Erich Fromm, Leo Lowenthal and more recently Jurgen Habermas (Stevenson, 2013). It is through the work of these philosophers that critical science came to be used as the emblem of philosophy which questions modern social and political life through a method of impending critique.

Horkheimer (1982) presented Critical Theory not only as being about eliminating one and or other forms of abuse but also to analyze the underlying social structures which result in these abuses and then finding ways to overcome or change them. This intention to analyze the possibilities of realizing liberation in the modern world required critical analysis of both barriers to, and intrinsic tendencies towards, the rational organization of human activities (Horkheimer, 1982, 2002).

According to Cox (1981) however, the focus of a critical theory is based on two core concepts: That it should be directed at the totality of society in its historical specificity and that it should improve the understanding of society by integrating all the major social sciences, including geography, economics, sociology, history, political science, anthropology, and psychology. Critical theory is adequate only if it meets three criteria (i) it must be explanatory (ii) practical, and (iii) normative, all at the same time (Horkheimer, 2002). That is, it must explain what is wrong with current social reality, identify the actors to change it, and provide both clear norms for criticism and achievable practical goals for social transformation (Cox, 1981).

A critical political economy approach becomes important for a study like this one, which is seeking to analyze the politics of the design and implementation of a global climate policy intended to induce far-reaching changes to the social, economic and cultural realities of millions around the world. The lens helps in interrogating questions of how the

prevailing world economic order has influenced the design and or implementation of REDD+ strategies and outcomes.

It is reasonable to believe that the question of whether REDD+ in its current state will achieve its central objective is linked to the political and economic interests of various actors involved in its framing, financing, and execution. This lens will also help in understanding the extent to which the ideas and the normative aspects of climate change had influenced the design of REDD+ policy and to what extent it was influencing its implementation and sustainability.

3.2.1 Neo-Gramscian theory as a Critical Political Economy lens

The neo-Gramscian theory goes back to Antonio Gramsci, an Italian writer who developed some of the fundamental insights in today's understanding and explaining of political economy (Bieler, 2001; Levy and Egan, 2003; Bieler and Morton, 2004; Katz, 2006; Jubas, 2010; Caruso, 2016). Most of his work is drown from his famous but fragmentary notebook which he wrote while serving a prison sentence in an Italian prison from 1920 to 1947. It is from his writings, however, that several other writers have gone on to interpret and develop a neo-Gramscian theory to better explain the relationship between agency and structure.

Neo-Gramscianism is useful for studying international relations and how ideas, institutions, and material flow shape specific forms of state formation. The theory is influenced by the writings of Antonio Gramsci (Cox 1983). Neo-Gramsci theory further helps in analyzing how the assemblage of social forces, the state and the dominant construct of ideas define and sustain world orders. The theory is also useful in exploring how international political and economic structures as well as decision-making processes, interact with the diverse and complex social relations found in local situations (Newell and Bumpus, 2012).

However much of what has become to be known as neo-Gramscian perspectives have been synthesized by Robert Cox in his ground-breaking work of 1983. The growth of critical political economy theories, like neo-Gramsci in understanding global environmental governance, has been to a larger extent supported by the growing need for radical

approaches that are able to help evaluate underlying and complex power relations in global environmental management (Weber, 2002; Newell, 2008; Mert, 2009; Gareau, 2012). Newell (2008) for example noted that the reason for adopting radical frameworks for understating global environmental governance was from the increasing evidence of private sectors assuming public functions of regulation and stewardship about natural resource management and utilization. Studying investment ideas, decisions of firms, banks and donors and other financial actors in global environmental governance; would provide the basis for understanding what forms of actions are possible and practicable in today's neoliberal global economy. Bieler and Morton (2004) also note that unlike conventional International Relations theories which reduced the concept of hegemony to a single dimension of dominance based on the economic and military power of states, neo-Gramscian perspectives extended the domain of the concept.

3.2.2 Neo-Gramscianism in Global Environmental Governance

The neo-Gramscian political economy is relatively a new field of inquiry in global environmental governance that has taken a somewhat different approach to traditional international relations theory (Levy and Egan, 2003; Bieler and Morton, 2004). Many scholars have drawn on neo-Gramscian perspectives to analyze global environmental governance at various levels and focusing on various issue areas (Bulkeley and Schroeder 2011; Elah and Okereke 2014; Okereke, et al. 2009). For example, Elah and Okereke (2014) have used neo-Gramsci to analyze the politics of the Carbon Market. They argue that contestations for climate justice across different geographies are highlights of the limitations of carbon markets. They conclude that while market mechanisms for climate solutions across scales of governance may have served well to recruit disparate interests into the global climate change management project, chances for radical emission reduction will remain very slim, unless there was a dramatic shift in the current social order of production and concomitant ideological, material and organizational practices (Elah and Okereke 2014: 1). They also found that while the notion of passive revolution was useful as an analytical tool for understanding the strategies employed by the hegemonic group to secure its continued dominance, the concept of the war of position was elusive to prove in the analysis of carbon markets (Elah and Okereke 2014: 24). They note that challenging a hegemonic order was not a simple task (Elah and Okereke 2014: 25)

Newell and Levy (2006) applied Gramscian concepts to understand the process of contestation and accommodation and to locate corporate political strategy within the wider system of states, civil society, and international institutions. They argue that the Gramscian approach suggests the dominant yet contingent position of business and points to a strategic concept of power that highlights the dynamic and unknown areas of regime evolution.

Okereke, et al. (2009), have also used neo-Gramscian and governmentality perspectives to analyze the nature of power in global governance as well as to understand the relationship between public and private authority. They also used it to understand and explain the dynamics between structure and agency as well as the rationalities and practices of governance. They find that governmentality and neo-Gramscian perspectives generate an understanding of power that is radically different from those implied in regime analysis and global governance. Okereke et al (2009: 72) posit that rather than seeing the power in distributive, zero-sum terms, using governmentality and Gramscian perspectives they could demonstrate that power is multiple and relational indicating that power is constituted through social relations as well as a function of the specific alignment of social structural forces at any given time. They further posit that insights from neo-Gramscian and governmentality approaches helped generate an understanding of the state that is radically different from the traditional theories. They argued that the question of how climate change is governed is not merely an interesting empirical matter, but has significant consequences for the ways in which scholars conceptualize structure and agency, the state and power. They suggest that further scrutiny of these concepts had the potential to enable a more thorough understanding of the agents, processes, and practices of governing of climate change, and of its potential to make a difference to the global climate.

Bulkeley and Schroeder (2011) also used neo Gramscian perspectives and combined them with governmentality to challenge the assumptions that the boundaries of state versus non-state and public versus private can readily be drawn. They examined the governing of climate change in two global cities, London and Los Angeles. They found that the roles of actors, as state or non-state; and the forms of authority; public or private; are not pre-given but are forged through the process of governing. They suggest that a more dynamic account of the state can offer a more nuanced means of analyzing the process of governing global

environmental affairs. They posit that in order to understand the process and the outcomes of governing climate change, the analysis should focus on the hegemonic projects and programmes through which the objects and subjects of governing are constituted and contested, and through which the form and nature of the state and authority are accomplished (Bulkeley and Schroeder 2011). They further suggest that this process achieved and held in place through 'forging alignment' between diverse social and material entities in order to achieve the 'right disposition of things' through which the will to govern climate change can be realized. One of the important arguments they make is that the process of forging consensus is not only done by institutions of the state that seeks to determine the conduct of others, but non-state actors also shape the extent and limit of the state.

Gramscian scholars have concluded that neo-Gramscian political economy perspectives were strong in their ability to explain relations of power among an array of private, public and civil society policy actors across geographical spaces and scale (Okereke 2015). Neo-Gramscian approaches were helpful in examining the roles of material, organizational and discursive practices that shape social relations of power. Contrary to the Marxist view of domination, where the relationship between dominant class and the subordinate is explained in terms of continued use of brute force, a Gramscian account suggests a dialectical relationship driven by ideas and cohesion by consent (Matt and Okereke 2014; Okereke 2015).

This study, therefore, draws on neo-Gramscian political economy perspectives of cultural hegemony and related concepts; historical bloc, passive revolution, and war of positions developed by Robert Cox (Scott, 1977; Cox, 1983), to analyze the governance and prospects of the UNFCCC recommended REDD+ achieving its central objectives.

3.3 Key Concepts

3.3.1 Hegemony

Hegemony, in neo-Gramscian perspectives, is an expression of broadly based consent, attained in the acceptance of ideas and supported by material and resources of the controlling states (Bieler and Morton, 2004). This definition extends the traditional

explanation that looks at hegemony as class domination system attained by the powerful states through the use of material and military domination over week states. Gramsci argues that hegemony was not necessarily arrived at by use of force but through ideological and consensual leadership (Cox, 1983; Katz, 2006; Matt and Okereke, 2014). For Gramsci, hegemony is successfully attained when a dominant class links its interest with the subordinate in the pursuit of a new social order that produces its own dominant position (Scott, 1977; Cox, 1983; Bieler, 2001; Bieler and Morton, 2004; Katz, 2006). Hegemony is thus rooted in the consensus and manifested in the legitimacy of universal acceptance of the ideas, materials and social logic of the elite-states (Robinson, 2004, 2005; Okereke, 2015).

In looking at hegemonic power, Gramsci makes a clear explanation of the roles of political society and civil society. He presents the political society as a group that rules through force while the civil society (NGOs, Church, and Media) rules through consent. The combination of these two groups produces a supper structure that through its institutions and ideological roles creates dominant styles of identity and thought.

This perspective is thus important for analyzing global programmes like REDD+. This is so because REDD+ by design involves various actors both state and non-state with varying political and economic interests at international, national as well as local levels. Furthermore, the REDD+ programme involves a construct of ideas and conditions that require consent from both the developed states as well as the underdeveloped states with clear guidance from civil society. This understanding is also important in evaluating the prospects of a REDD+ programme to succeed as well as in suggesting new strategic governance approaches to aid its success.

3.3.2 The Historic Bloc

Antonio Gramsci, (1971), describes the historic bloc as comprising groups with shared material or ideological interest. For Gramsci, the idea of a historical bloc was purely an attempt to solve the Marxism problem of the reciprocal relationship between what he calls the economic base and its political and ideological superstructure (Gramsci, 1971). Gramsci presents historical blocs as projects in which a class maintains its dominance not simply through organized force, but also by going beyond its narrow cooperative interest

and exert a moral and intellectual leadership and make compromises within limits with several allies. This alliance results in a unified social bloc of forces (Cox, 1981, 1983). On the other hand, Robinson (2005) suggests that by analyzing the historical bloc, it would be possible to show how material forces were the content while ideologies were the form.

Robinson (2005) describes the notion of Gramsci historical bloc as the basis of consent for a certain social order, in which the hegemony of a dominant class is created and re-created in a web of institutions and social relations and ideas. He further describes it as a social ensemble involving dominant strata and a social base beyond the ruling group and in which one group exercises leadership imposing its project through consent of those it dominates.

For, Levy and Newell (2005), a historic bloc is a configuration of state authority, economic dominance, and civil society legitimacy. They posit that the notion of historic bloc goes beyond the formation of alliances but also to consider the specific alignment of materials, organizational and discursive formation that are responsible for stabilizing and reproducing relations of production and meaning (Levy and Newell, 2005; Robinson, 2005).

But the key to the development and shaping of the historical bloc is the role played by organic intellectuals (Gramsci, 1971; Bieler, 2001). Gramsci (1971) suggests that these intellectuals were organically linked to specific social groups, including political groups, academia, media, and private cooperation's and of NGOs (van Apeldoorn, 2002: cited in Matt & Okereke 2014). The role of the organic intellectuals is that of giving each social group, homogeneity and an awareness of its own function, not only in the economic but also in social and political fields (Gramsci, 1971) often framing transformations in ways that make sense to the public.

3.3.3 Passive revolution

For Gramsci, a passive revolution is described as a political form in which social struggles find sufficient flexible frameworks to allow the bourgeoisie to gain power without dramatic commotion (Levy and Egan, 2003; Morton, 2007; Okereke and Ehresman, 2014; Caruso, 2016). This concept refers to social, economic and political reforms which happen through consent and not brut coercion. Passive revolution strategies are often installed by the dominant class to capture, redirect or neutralize the impetus for radical change (Morton,

2007). It relates to the reorganization of economic, political, and ideological relations, in response to a crisis that maintains the passivity of subordinate groups, and the separation of leaders and led (Jessop, 1982 cited in Matt & Okereke, 2014).

3.3.4 War of Position

Gramsci, explains war of position as being a development of strategies by the led to bring down the dominant hegemonic bloc (Cox, 1983; Gill, 1993a, 1993b; Okereke, 2015). A war of position is seen more like resistance to domination using culture rather than physical might (Cox, 1983; Bieler and Morton, 2001; Katz, 2006; Okereke and Bulkeley, 2007; Okereke, 2015). For Cox, (1983), a war of position is a process which slowly builds up the strength of the social foundation of a new state by creating alternative institutions and alternative intellectual resources within existing societies. The war of position is thus seen as a counter to cultural hegemony grounded on ideas.

Matt and Okereke (2014), posit that to gain the position of influence, the subordinate groups needed to develop long-term strategies coordinated across multiple bases of power. This would mean gaining influence in the cultural institutions of civil society and winning new allies.

3.4 Power

Power in international development literature is often looked at as the ability of 'A' to influence or control the behavior of 'B'. Clegg (1989) describes power as being unpredictable and having a profound dependence on context. Although power exists in many forms, in this research two types of power are selected; coercive power and reward power.

For Gibson et.al (1991; cited in Lunenburg 2012), reward power can be gained from one's capacity to provide 'incentive' for compliance (Molm D, 1997; Lunenburg, 2012). Reward power could also be used to support legitimate elite control over the poor masses. When someone is rewarded or expects to receive a reward such as through recognition, a good job assignment, a pay rise, or additional resources or meets the set standard, the employee or group may respond in kind by carrying through with orders, requests and directions (Clegg, 1989; Molm D, 1997; Spoelstra and Pienaar, 1999; Lunenburg, 2012). Most often

rewards involve financial payment but can also be immaterial and or consisting of verbal promises to gain financially by establishing a relationship and adhering to set standards or requirements (Molm D, 1997; Spoelstra and Pienaar, 1999; Lunenburg, 2012).

Coercive power, on the other hand, is considered as the opposite to reward power. It is defined as the ability of the power holder to eliminate something from a person or group to punish them for not conforming to a request or set standards (Molm D, 1997; Spoelstra and Pienaar, 1999; Lunenburg, 2012). The principle behind this move is to cause fear, and it's this fear-force which causes coercive power to be effective. A neo-Gramscian perspective to coercive power brings in the idea of consent. Here, domination is not obtained through the use of force or fear but through discursive approach leading to a consent (Martin, 2002; Levy and Egan, 2003). Parties to an integrative negotiation where cohesion power is used, pay the costs before the actual agreement is reached, while parties involved in a war often pay the cost later and in many occurrences, long after the war has ended. It should be noted, however, that in certain times reward power was combined with coercive power despite the two different forms of power often being subjects of semantic confusion.

Contemporary thinkers have gone further to open the discussion and understanding of the concept of power (Gaventa 2003; Wilkinson 1998; Andreas Bieler and Morton 2004; Caruso 2016). In this study four perspectives on looking at power are presented: The first is from Foucault who posits that it was not necessarily important to look at where power and authority were located but how that power was exercised. He argues that while power may be flowing from the center, its final form is nevertheless determined by the specific socio-cultural dispositions of the local situation. For Foucault, the local level is the field where power is felt (Okereke and Bulkeley, 2007). While this perspective of power may be useful when analyzing global policies like REDD+ its insufficiency is in its insensitive to the class divisions, power struggles, and resistances that characterize socio-political relations when managing the global commons (Okereke and Bulkeley, 2007; Okereke, 2015)

The second perspective is the state-centric view of power often associated with regime theories on governance of the global commons. This perspective assumes that all power

lies in the state or government to control and manage the resources. Although regime theory is helpful analyzing state policies and impacts they exert as well as state interests behind policies and action, the theory is weak in its conceptualizing of power (Bieler, 2001; McGuirk, 2004; Okereke and Bulkeley, 2007; Okereke, 2015). It fails to recognize the role of other non-state actors like NGO, churches, civil society and the media in influencing policy development and implementation. Its definition of a state is thus focussed on state government (Okereke and Bulkeley, 2007).

The third perspective of power that this study is interested in is from Steven Luke's (1974). He presents a three-dimensional model of power building on the old two dimensions of what is known as overt and covert dimensions (Wilkinson, 1998; Gaventa, 2003; Wibowo and Giessen, 2015). Luke introduced the latent dimension as the third dimension of power. While the overt dimension of power focuses on declared, political preferences revealing themselves in open political play while; covert dimension addresses political differences that reveal themselves through a complaint about political non-issues. But Luke's addition, the Latent dimension, deals with the relationship between political preferences and real interests (Wilkinson, 1998). In Luke's view, power is also measured by the ability to implant in people's minds interests that are contrary to their own good. Latent dimension is considered the toughest of the three to identify because it is difficult for those who are themselves influenced by the dimension to realize its existence (Wilkinson, 1998). Luke's view of analyzing power, is that it must not only focus on the two dimensions of covert and overt but must also include the entire political agenda, so as to examine its adequacy to the true interests of various groups (Gaventa, 2003).

The fourth and final conceptualizing of power that this study looks at is gotten from Antonio Gramsci. For Gramsci, power is conceptualized in terms of the alignment of forces relative to each other and to adversaries (Levy and Newell, 2005; Okereke and Bulkeley, 2007). Neo-Gramscian perspectives reject a one-dimensional or zero-sum notion of power often associated with traditional regime theories of international relations. Neo-Gramscian perspectives posit that power is derived from both social identities and from structural forces. Perhaps a much characteristic in Gramscian explaining of power relationships and how they are lived is in his use of the concept of Hegemony (Bieler, 2001; Levy and Egan,

2003; Morton, 2007; Caruso, 2016). Here, Gramsci posits that power was not necessarily a result of brutal coercion arguing that if that where the case, it would be impossible for the small elite to dominate the large masses (Cox, 1983; Martin, 2002; Jubas, 2010). Rather, he argues that consent was crucial for gaining long-term domination. He further argues that the complexity of the concept of hegemony was as entangled as coercion and consent were.

However, Robinson (2003) in his paper explains that the complexity of Gramsci notion of power is that on one end it is occupying a field with direct coercion through brute force (driven by political society) and on the other end the idea of willing consent (driven by civil society) (Robinson, 2003; Levy and Newell, 2005).

A neo-Gramscian account of power is critical in this study which analyses how climate change actors use their power to influence the design of global climate change policies and their implementation in developing countries. Gramsci's understanding of how coercive power is gained and maintained in today's global systems helps identify influences that are silent or unobservable but with implications that in long run affect the intended outputs and outcomes of policy. There is a clear link between Gramscian concepts of power to how Luke's conceptualizes power and therefore a reference to both these concepts in analyzing a programme like REDD+ is vital.

3.5 Chapter Summary

The focus of this chapter was to present a theoretical and conceptual framework which is suited for analyzing REDD+ as a global multi-actor mechanism for addressing drivers of deforestation and forest degradation in tropical developing countries. Considering the nature of risk that Climate Change presents as confirmed by the IPCC and UNFCC, it has come apparent that to reverse this imminent problem, the world must be ready to take drastic decisions and approaches that can challenge the world order and help meet desired objectives within desired time frames. Although traditional IR approaches of problem-solving have and are still helping in understanding the various challenges in the governance of climate change, they have proven to be inadequate in bringing out critical questions on

power and interests that were shaping the development and implementation of global policies on climate change, like REDD+.

The REDD+ policy on addressing deforestation in developing countries is one such measure that has emerged as a global policy with the hope of not only abating climate change but also bring about sustainable development in the implementing countries. There are critical questions about its potential to succeed mainly arising from the way it is framed, governed, financed and being localized. The questions largely boarder on power influences and political and economic interests among states and non-state actors involved in REDD+ governance at global, national and local levels and how these interests were affecting the success of the programme.

To answer these questions as well as enhance or provide alternative approaches, Neo-Gramscian political economy perspectives of hegemony, historic bloc, passive revolution and war of position, proved useful in analyzing power relations, interest, and influences in agency-structure relationships. This radical theoretical lens was selected because REDD+ was a global programme with a multi-scale and multi-actor governance structure involving both states and non-state actors exerting each different political and economic interests. The REDD+ policy is designed in a way that gives responsibility to both developed and developing countries depending on their material/ resource capabilities thereby attracting a complex governance structure requiring a more radicle and deep searching tools for its analysis. The CIPE theory thus becomes important here, because of its ability to bring out the underlying influences and interests that were either aiding or hindering the success of such a program. The fact that Neo-Gramscian political economy perspectives include the analysis of the role of non-state actors in global governance structures across geographical spaces makes this theory even more useful in analyzing a multi-actor and multi-scale policy like REDD+.

The lens gave the study much room for analyzing both the design of methodological guidelines of REDD+ as well as in explaining the meaning behind statements, classification, and definitions of the problems and prescribed solutions. The presentation of discourses in neo-Gramscian perspectives, as pathways for transferring ideas for legitimizing continued domination of the elite over the subordinates further helped the

study in a critical understanding of the barriers and contestations in linking the international and local contexts of the problem.

In conclusion, a critique that looks at the totality of the programme both in terms of ideas, governing, interest process and the end of a programme are vital in predicting the programme's effectiveness. In addition, the fact that climate change decisions and policies involve various institutions and states from across the globe playing different roles in governance and their implementation, a neo-Gramscian IPE provides the best lens to analyze the underlying political and economic interests from both the state and non-state actors that were influencing design and outcomes of REDD+.

4 CHAPTER FOUR: CASE STUDY AND METHODS

4.1 Introduction

This chapter presents the methodology and sites used for this study. A researcher's choice of methodology implies the use of certain rules and techniques, with different meanings and purposes (Carson et al., 2001). This includes approaches to data collection, data analysis and the presentation of research findings. This chapter, therefore, explores the epistemology and philosophy that serves as a guide within which the study is conducted. The second section discusses the choice of research methods and the justification for their adoption. The third section gives a profile of Zambia and presents it as a country of study. The later sections of the chapter address the researcher's positionality, the ethical considerations of dealing with humans as subjects of research, and the limitations of the study.

4.2 Methodology: Research philosophy, ontology, and epistemology

According to Carson et al. (2001), different research studies will require different ontological, epistemological and methodological commitments. Having an educational as well as a working background in natural resources management in Zambia the researcher approached this study from the perspective that global mechanisms like REDD+ tend to prescribe interventions that are at variance with local and contextual situations. Like many other global instruments that have been tried in Zambia, REDD+ has potential challenges for its implementation at the local level.

My epistemological ideology adopts an interpretive approach (Carson et al., 2001). This approach allows my previous experience, knowledge, and understanding as a natural resource professional to guide the research. Interpretivism brings together the existence of varied realities, which are relative and created from social interactions, personal experiences and constructed meanings, as opposed to being objectively determined (Carson et al., 2001).

In the context of REDD+, an interpretivist approach allows the research to bring out the different meanings stakeholders, including state officials, NGOs/CSOs, private sector actors, traditional leaders, farmers, and local forest community dwellers, attribute to

REDD+ policy and processes. My experience and the review of academic writings impact my interpretation of the study's findings (Duberley et al., 2012). The experience of the researcher affects how the issue researched is understood and structured Carson et al. (2001).

Carson et al. (2001) support a balance of inductive and deductive approaches for Interpretivism. While this research uses an inductive approach in its primary data collection, it also employs a deductive framework in its systematic review of REDD+ secondary literature, using the neo-Gramscian political economy lens.

4.3 Research Design

4.3.1 Qualitative Research

A qualitative approach was selected under this study. A qualitative approach is explanatory research method that is used to gain an understanding of the underlying reasons and interests (Wengraf, 2003; Williams, 2007; Smithson, 2008; Yin, 2009; Babbie, 2012; Ingleby, 2012) behind actions and attitudes. It is also used to uncover patterns in thought and opinion around the problem (Neuman, 2003; Collins, Onwuegbuzie and Jiao, 2006; Collector and Module, 2011). The techniques for qualitative data collection vary. They include Semi-structured interviews; focus groups; face-to-face interviews; participation and observation (Neuman, 2003; Collins, Onwuegbuzie and Jiao, 2006; Collector and Module, 2011). Further, qualitative approaches often work with small sample size, with respondents selected to fulfill a given part (Collins et al. 2006; Collector & Module 2011; Alasuutari et al. 2008; Harding et al. 2002; Figgou & Pavlopoulos 2015; Mackenzie & Knipe 2006).

In this study, therefore, in-depth qualitative techniques were adopted to tackle the broad range of issues both at international and national REDD+ governance levels. Documentary analysis was used to critique the global conceptualizing of the REDD+ mechanism and trace political and economic interest behind the framing of the mechanism. Semi-structured expert interviews involving local experts in Zambia was also conducted to generate views and attitudes among the key players in the design of the national REDD+ strategy for Zambia as well as its potential to succeed. A systematic review of REDD+ literature was

also conducted to understand the different perceptions of drivers of deforestation and forest degradation by REDD+ actors as well as the suggested strategies for addressing them.

Table 3 below shows how the techniques were used in addressing each of the objectives that the study had set.

Research Objective	Key Questions	A sample of Field Questions used	Methods Adopted	Justification of method	Analysis Used
To understand how different actors define the problems driving deforestation and forest degradation in Zambia and the implications on nature and focus of REDD+ strategies	How do REDD+ actors describe and define the drivers of deforestation and forest degradation and how does this affect the focus of corrective strategies?	-What are the main drivers of deforestation and forest degradation in Zambia? -How best do you think these drivers can be addressed?	Expert interviews Documentary analysis Systematic literature review	Gave empirical insights into REDD+ national policy process to show how REDD+ is translated from the international to national Identifies power/influence dynamics amongst stakeholders to draw out marginalized actors Analysis	Critical analysis of peer-reviewed empirical literature on REDD+ community projects. Content analysis
To understand as to whether the proposed REDD+ strategies can adequately address deforestation and forest degradation driven by demand for energy in countries like Zambia	Can the REDD+ incentive-based strategies address deforestation and forest degradation is driven by demand for energy in countries like Zambia?	-Has REDD+ adequately provided strategies to address energy driven deforestation and forest degradation? -Does REDD+ support investment in large scale energy as an activity requiring incentives? -Are suggested incentives adequate to influence people to stop charcoal burning	Expert interviews Questionnaire survey with local communities Documentary analysis	Gave empirical insights into REDD+ national policy process to show how REDD+ is translated from the international to national Confirms established knowledge and identifies gaps in research (geographical and content) and practice.	Analysis with QSR Nvivo software package Content analysis Content analysis
To understand the role of state and nonstate actors in the development of REDD+ policy and financing regime and their impact on the national design of REDD+ strategies and action plans	What role have various institutions played in shaping REDD+ in Zambia and who actually has more influence in shaping REDD+ strategies?	Who has more power and influence in shaping REDD+ in Zambia How have other institutions participated in REDD+ processes in Zambia Who actually Runs REDD+ and why? How has this affected the localization and implementation of REDD+ in Zambia	Expert interviews Systematic literature review Documentary analysis	Identifies the gaps that exist in REDD+ institutional set up to help improve holistic governance of REDD+	Analysis with QSR Nvivo software package Content analysis

4.3.2 Case Study and Fieldwork

The research adopts an exploratory case study approach to exploring REDD+ as an instrument that has no clear, single set of outcomes (Baxter and Jack, 2008). According to Yin (2014), using case studies presents reliable and rigorous evidence of the phenomenon in question.

A case study is an in-depth investigation of a single person, event or community (Yin, 2003, 2008, 2009; Irwan, Tacconi and Ring, 2013). It is not itself a research method. It attempts to examine contemporary phenomena in its real-life context. It is often useful when boundaries between phenomena and context are not clearly evident (Robert K Yin, 1994; Robert K. Yin, 1994; Yin, 2003).

Case studies allow for the use of multiple data sources, which is ideal for qualitative research design. Using multiple data sources as a strategy enhances data credibility (Baxter and Jack, 2008). Yin (2014) maintains that addressing a broader range of historical and behavioral issues, then approaching evidence from multiple sources, is useful. A further advantage of using multiple sources to draw data is the rigor and validation that is built into the research findings (Yin, 2014).

For Yin, (2008) a case study is the study of the particularity and complexity of a single case that must be understood within its important situation. The strength of case study approach lays in its in-depth multi-sided methods that shed light on aspects of human thinking and behavior that would be unethical and difficult to study using other approaches (Robert K Yin, 1994; Robert K. Yin, 1994; Yin, 2003).

For this research, therefore, Zambia and particularly the Copperbelt province was selected as a good case example. The study also looked at REDD+ project reports from five different African countries to draw data and lessons on how REDD+ was being implemented and its challenges.

4.4 Research Method Choices

Employing a range of qualitative methods is critical to validate the findings, as each source of data serves as an additional pathway to understanding the issues being researched. For this research, various methods were used to gather data.

4.4.1 Documentary Analysis

REDD+ discourses, decisions, and designs have evolved over time, and quite rapidly. This makes documents an important source for mapping the processes of REDD+ development. The documents of particular interest to this study are government proposals, progress reports, and other organizational records; policies and strategies; commissioned consultancy reports; minutes of multi-stakeholder meetings and consultations. These were obtained from the internet searches and from officials in the REDD+ Unit of the Forestry Department in Zambia.

Some of the documents proved helpful for profiling stakeholders and key experts involved in the Zambia REDD+ process. The contact details of some stakeholders were easily retrieved from meeting reports provided by the Zambian REDD+ secretariat. Table 4 below presents a list of specific documents that were analyzed during the study. These documents are available online. A search on google scholar with key search phrases and specific institutional names was used. The selected actors where picked based on their active participation in the development and design of the REDD+ programme.

4.4.2 Rationale for Selecting these Documents

The reviewed documents were selected based on their influence in shaping the development of REDD+ policy at the IPCCC between 2006 and 2016 and their closeness to the REDD+ process in Zambia. Key search words that were used to identify these documents from the internet are: *Drivers of Deforestation in Africa and Zambia in particular; UN-REDD+ in Zambia; Use of incentives in addressing drivers of deforestation and forest degradation; and National REDD+ strategies for implementing countries.*

4.4.3 Expert Interviews –Local Experts from Zambia

The study employed in-depth expert interviews from Zambia involving 47 experts from different institutions between 2015-2018, to further validate the inferences from the reports and project documents. In-depth expert interviews are cardinal as they help generate meaning and interpretations of statements and policies from practitioners and or implementers (Bradbury-Jones, Taylor and Herber, 2014).

Expert interviews were conducted for three main reasons: Firstly, to understand the different perspectives on the drivers of deforestation in Zambia and whether REDD+ strategies would be

adequate in addressing them. Secondly the interviews were conducted to understand the perceptions of various local experts on REDD+ in terms of its promise to attain its founding objectives of reducing greenhouse gas emissions resulting from deforestation and forest degradation as well as achieving sustainable development for implementing countries (Bryman, Becker and Sempik, 2008; Xenitidou and Gilbert, 2009; Collector and Module, 2011).

Thirdly the interviews sought to appreciate the roles and the extent to which various stakeholders and institutions in Zambia were participating in the UN-REDD+ programme.

Selection of Experts Interviewed

The local experts that were interviewed were selected from the list of people that participated in the various national workshops on REDD+ in Zambia. The list was obtained from the REDD+ national coordinator's office at the climate change secretariat in Zambia. They include representatives from government departments, the private consultants, the academia, civil society and local community representatives.

Key thematic questions were developed before the interviews to ensure that relevant issues were covered and captured in the interview. Although questions varied across the interview, some cut across. For example, at the policy level, common questions regarded stakeholder participation and barriers to implementing REDD+ in Zambia were asked to all.

The interviews were captured on paper and with a digital audio recorder. The audio recordings were a reliable resource for crosschecking what was said in the interviews at a later time. Audio recordings also helped tease out insights that were missed in the original interviews. Sometimes, the dialogue became very interesting and engaging, so the audio recordings helped bridge that gap I had in my paper notes.

4.5 Research Location: Zambia

4.5.1 Location, Climate, and Vegetation

Zambia is a developing country located in sub-Saharan Africa (Chidumayo, 1987a; Hervey, 2012; Shane *et al.*, 2016). It lies between latitude 8^{o} and 18^{o} south and 22^{o} and 34^{o} east in southern Africa (Kalaba, 2013; Leventon *et al.*, 2014). It is a land-locked country with eight neighbors around it. The climate of Zambia is tropical with two major seasons which summer (wet season) and winter

(dry season). Summer is between November and April while winter is between May to October (Chidumayo 1987a; Levenson et al. 2014; Kalaba 2013; Chidumayo & Kwibisa 2003).

The vegetation of Zambia is predominantly savannah woodlands. It is characterized by Miombo woodlands of Brachystegia and Julbernardia species estimated to cover over 2.7million km^2 in southern and east Africa (Chidumayo, 1987b, 1987a; Kalaba, 2013).

Figure 3: Location of Zambia on the Map of Africa (source: http://www.sawyoo.com/post_africa-map-zambia_70438/)

4.5.2 Economics and social status

Zambia has a population of 16.2 million people with an annual growth rate of 3.07 per cent (The World Bank, 2017). The higher proportions of Zambians live around the urban cities of the Copperbelt province and Lusaka (ECZ, 2008; GRZ, 2011b; Masaki, 2015; Ratnasingam, 2015b). The Copperbelt province and Lusaka are the most urbanized provinces in Zambia due to economic activities such as mining, agriculture, industry and other social services (ECZ, 2008). Copper mining is the major contributor to Zambia's economy providing over 8% to national growth domestic production. Successive governments have looked to diversify the economy away from copper dependence on agriculture and manufacturing (ECZ, 2008; GRZ, 2011b). Agriculture thus occupies the central focus in the countries 2030 vision of became a middle-income country (ECZ, 2008; GRZ, 2011b; Masaki, 2015; Ratnasingam, 2015b).

Poverty is one of Zambia's biggest challenges. As of 2011, over 53% of the population is said to be living under extreme poverty (ECZ, 2008; GRZ, 2011b). This is more prevalent among women-headed households. Over 73% of the extremely poor are in rural areas where access to basic needs and services is very difficult (ECZ, 2008; GRZ, 2011b).

Low employment level is yet another biggest problem that the country faces. According to the Central Statistics Office (CSO), only 21% of the employable population were in formal employment across the country (GRZ 2011b).

4.5.3 Land and Land Tenure

Zambia has a total land area of 752, 614 km^2 (Kalaba, Quinn and Dougill, 2013). The country is mainly a plateau with an altitude of 1200m above sea level (Vinya *et al.*, 2011; Mwitwa *et al.*, 2012; Kalinda *et al.*, 2013). The Land Act of 1995 provides the legal framework for land management in Zambia. The Act vests ownership of all land in the president who holds it in trust for the people of Zambia (ECZ, 2008).

Zambia uses a mixed land tenure system: leasehold (state land) and customary tenure (Hervey, 2012; Kalinda *et al.*, 2013; Kalaba, 2016). The commissioner of land administers state land on behalf of the president, for agriculture, commercial, industrial and residential purposes. The land commissioner delegates some of his functions to other government departments and agents like local authorities, the ministry of agriculture as well as the forestry department to help in the management of the land resources (ECZ, 2008).

Customary land is under the management of local traditional leaders (ECZ, 2008; Kalaba, 2013; Arslan *et al.*, 2015). This is reserve and trust land derived from the continued and historical occupation of various groups of indigenous peoples. The chiefs and or traditional leaders who administer this land do not, however, have the power to issue title but administer the land on behalf of their subjects mainly for livelihood projects like farming, hunting and collection of forest and non-forest products (ECZ, 2008; Kalaba, 2013; Arslan *et al.*, 2015). As of 2007, customary land in Zambia accounted for 93 per cent of the total land mass (ECZ, 2008; Kalaba, 2013; Arslan *et al.*, 2015). The security of owning customary land is in ones continued use of the land for livelihood activities (ECZ, 2008).

4.5.4 Land use activities in Zambia

The main land-use activities in Zambia include copper mining, agriculture, fishing, wood harvesting, animal farming and collection of other non-forest products (Vinya *et al.*, 2011; Kalinda *et al.*, 2013; Müller *et al.*, 2013; Day *et al.*, 2014; Kalaba, 2016). The government of Zambia through various country-planning documents has indicated an economic shift from dependant on copper mining to promoting agriculture and manufacturing as the main economic activities to eradicate poverty in most rural areas of the country (GRZ, 2011b; Chishimba, Chundama and Akakandelwa, 2013). Mining on the other hand still occupies a significant position in the countries development plans and efforts (GRZ, 2011b; Chishimba, Chundama and Akakandelwa, 2013). The sector is prominently prevalent on the Copperbelt and North-western provinces of the country (ECZ, 2008).

4.5.5 The Copperbelt province of Zambia

This study identified and used the Copperbelt province of Zambia as a case of study. Copperbelt province is situated about 300KM away from Lusaka, which is the capital city of Zambia. The population of Copperbelt is over 2 million people (Vinya *et al.*, 2011; Kalaba, 2013; Turpie, Warr and Ingram, 2015; Shane and Gheewala, 2016). It is located between latitudes 12^{o} 20’ and 13^{o}50’ south and longitudes 26^{o}40’ and 29^{o}15’ east. The province covers a total land surface area of 31,014 km^2 and has a high rainfall area, receiving an average of 1200mm of rainfall per annum. It experiences three weather seasons namely: hot dry which is from September to November, rainy season, December to March and a cold dry season from April to August (Chidumayo, 1997, 2008).

The Copperbelt province is largely a Miombo woodland representing about 90% of the province’s total vegetation (Chidumayo, 1989, 1997; Chidumayo and Gumbo, 2013). Copperbelt is largely a copper mining town province of Zambia (Mwitwa *et al.*, 2012). Owing to the job opportunities provided by this industry the province's population mainly from migration has risen making it the second most densely populated province in Zambia at 62.5 persons / km2. This is about four times the average national population density of 17.3 persons/km2 (Central Statistical Office (CSO), Ministry of Health (MOH), Tropical Diseases Research Centre (TDRC), the University of Zambia and Macro International Inc., 2009; Likwa, 2015; The World Bank, 2017). The forest-dependent communities on the outskirts of mining towns are ethnically heterogeneous and dynamic because of migration (Mwitwa *et al.*, 2012).

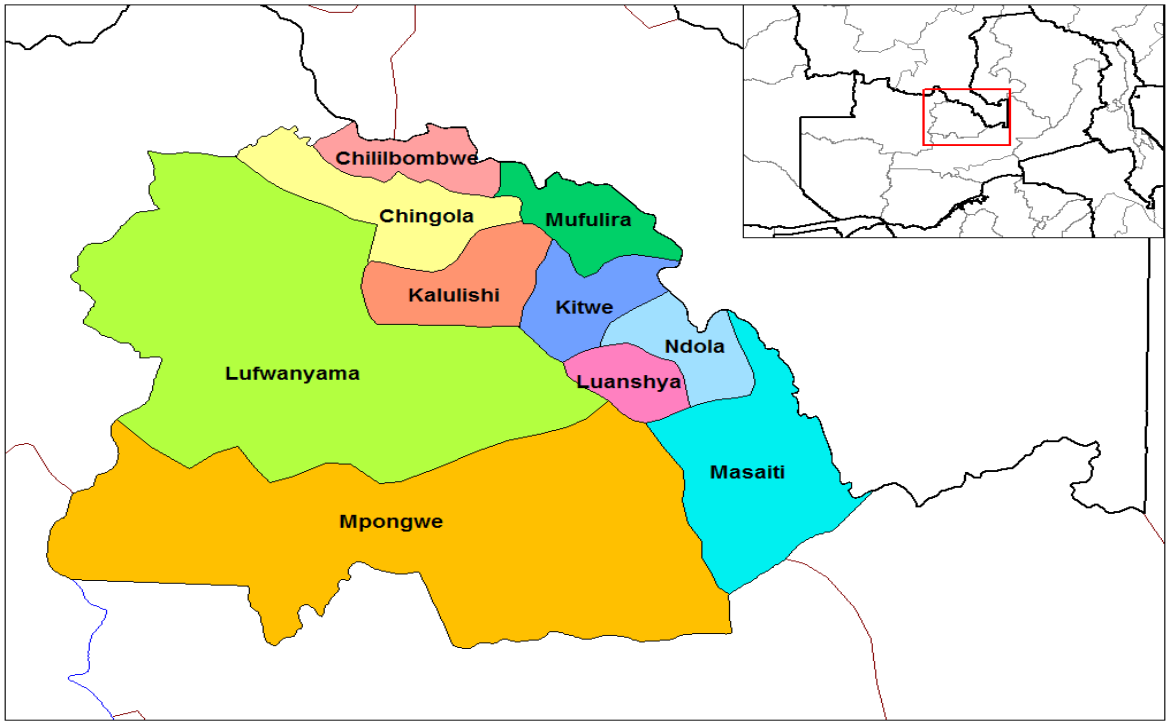

Figure 4. Map of Zambia showing study area district of Copperbelt province (Source: Google Maps 2015)

Access to a clean, affordable and efficient source of energy, like many other places in Zambia is one of the major problems in this province (Vinya *et al.*, 2011). According to Chidumayo (2005), Copperbelt was the most affected province from charcoal led deforestation. These reasons made this place a suitable study area for this research.

4.6 Ethics

Research involving humans is expected to be conducted in an ethical and legal manner for the protection of human rights (Morrow and Richards, 1996; Orb, Eisenhauer and Wynaden, 2000; Paul *et al.*, 2003; British Psychological Society, 2014). Ethical consideration is also important to ensure the protection of participants from undue risk and exposure which would result from their participation in the study (Babbie 2015). This study, therefore, ensured that due requirements and authorization to undertake the study was obtained from the University of Reading prior to the commencement of data collection. The full names and details of the people that participated in the interviews both in the expert interviews as well as the household surveys have been withheld.

It should, however, be on record that the questions and nature of data that this research was seeking presented insignificant levels of risk to the respondents. In addition, the researcher is a Zambian national who understands the local languages, culture, and risks within the case study area.

During the interviews, the researcher ensured that interviewees fully understood the aim of the research before they accepted to be interviewed. The researcher explained the details of the research and its purpose and allowed the interviewee to respond willingly to questions they were comfortable to answer. The researcher also asked the interviewees (expert interviews only) for their consent to be audio recorded during the interviews.

The student helpers who were tasked to administer the questionnaires were also given a short training on how to ensure that the interviews were conducted in an ethical way.

4.7 Data Analysis

4.7.1 Secondary Data Analysis

To determine the gaps in scholarship and identify the appropriate field sites for data collection, a systematic literature review was conducted. Systematic literature reviews vary from traditional reviews and are relatively novel within the development and environment sector. According to Shadish et al. (2005), large amounts of information, as commonly associated with a traditional review, can lead to bias and prejudiced selection of studies to support the author's own arguments.

A well-defined methodological approach is laid down prior to the review, to produce a transparent and replicable process (Pickering and Byrne, 2013). Using the systematic review approach, the study maps out the implementation progress and gaps in the literature on global REDD+ projects. The systematic review approach comprises a three-tier approach: systematic search, critical appraisal, and synthesis. To increase the trustworthiness of a systematic review, a key feature is the need to document and describe the process as it is carried out.

The review shows a lack of existing empirical data on REDD+ activities in Southern Africa. This supports the need to conduct the study in the researcher's home country, Zambia.

4.7.2 Content Analysis

The audio recorded interviews and discussions from the field were transcribed verbatim. This allowed flexibility in processing the data comprehensively. The local community interviews were transcribed directly from Bemba (Zambian local language) to English. A total of 262,657 words were transcribed for the whole study. In addition to the help of the research assistant during the transcription process, a Zambian local language teacher helped to cross-check certain parts of the interviews that contained traditional proverbs and technical names and phrases.

The transcriptions were imported into Nvivo 10 software to allow proper organization. According to Carson *et al.* (2011) where there is a large quantity of data requiring coding, annotation, linking, search and retrieval", the software packages are best used. Data organization allowed easy access and appropriate clustering of findings according to the fieldwork periods. To guide the analysis, the interview data were classified into themes, meaning units, condensed meaning units and codes. The codes were decided from the interviews and topics. New codes were introduced as they emerged in the data coding process. The coding stage served in organizing the data according to the topics and sub-topics of the research. During the coding, interrelationships between data were marked and noted.

As mentioned, the analysis of the study was both deductive and inductive for the empirical data from primary fieldwork.

I used content analysis to navigate and interpret the findings in each thematic area, construct meanings and layout discussions. Content analysis is a type of qualitative analysis. It is used to analyze classifications and present themes (patterns) that relate to the data. It illustrates the data in great detail and deals with diverse subjects via interpretations (Ibrahim, 2012; Maguire and Delahunt, 2017)

Content Analysis is considered the most appropriate for any study that seeks to discover using interpretations. It provides a systematic element to data analysis. It allows the researcher to associate analysis of the frequency of a theme with one of the whole content (Ibrahim, 2012). This will confer accuracy and intricacy and enhance the research's whole meaning. Qualitative research requires understanding and collecting diverse aspects and data. Content analysis gives an opportunity to understand the potential of any issue more widely (Ibrahim, 2012).

Some data analysis also took place during the data collection process, which helped reformulate questions and pursue an inquiry into new areas, as they arose. The thinking and reflection that led to changes and adaptations in the field, constitute data analysis (Ibrahim, 2012).

The study employed interviews and organizational website visits to fully map out the actors in Zambia's REDD+ policy process.

4.8 The limitation of the Methodology

Although I traveled to Zambia on two occasions, the time to engage with more experts who had participated in the national REDD+ strategy formulation in Zambia was limited. Most of them were either busy or far away and could not do the interviews within the time I was in the country. I had to conduct phone interviews with four experts who were in far provinces from Lusaka and Kitwe. Three experts interviewed by phone refused to have the interview recorded. The research funds available to the researcher could only allow two field trips to Zambia in which time all data was expected to have been collected. This is despite the fact that the research area was an evolving strategy formulation exercise in which the researcher's participation could have provided him with more insights.

5 CHAPTER FIVE: PERSPECTIVES ON DRIVERS OF DEFORESTATION AND FOREST DEGRADATION & IMPLICATIONS FOR REDD+

5.1 Introduction

This chapter addresses the issue of perception of drivers of deforestation and forest degradation by international and national actor working on REDD+. Central is how the strategies for addressing the drivers measure up with the rank and classification of particular drivers. It presents views from international actors and those in selected national REDD+ strategies from Africa. The chapter provides an analyses of Zambia's national REDD+ strategy and shows how the strategy has defined the problem behind forest cover loss and how it proposes to address them. Views from local REDD+ experts from Zambia are also presented to understand how they defined and understood the drivers of deforestation and forest degradation.

The chapter then shows how actors in REDD+ give much attention to providing solutions that focus on addressing agriculture-driven deforestation and gives little attention to energy solutions. This is evident in the focus of both REDD+ finance and the suggested strategies for addressing drivers of deforestation in Zambia and other sub-Sahara African countries. The argues that the way drivers are classified and rated has affected the focus of strategies focusing mainly on 'deforestation' driven by agriculture while paying little attention to 'degradation mostly driven by energy demand (charcoal production). It further argues that unless REDD+ solutions extend beyond the targeted forest communities to address such things as energy demand (by providing alternative sources of energy to wood fuel) in urban areas the mechanism will most likely fail to achieve its central objective of reducing greenhouse gas emissions

5.2 Background: Deforestation and Forest Degradation Under REDD+

Deforestation in most literature is defined as the total destruction of forest habitats by clear-cutting or conversion of the forest to other forms of land-use such as agriculture and industrial development (Kissinger, Herold and De Sy, 2012; Kissinger, 2013; Weatherley-Singh and Gupta, 2015; Liu *et al.*, 2016; Nielsen, 2016). Degradation, on the other hand, is defined as, the change in the quality of forests and forest ecosystems through the loss of key species (Kissinger, Herold and De Sy, 2012; Putz and Romero, 2012). Forest degradation is said to result from selective logging, extraction of non-timber products and or due to uncontrolled bush fires (Kissinger, Herold and De

Sy, 2012). The two, however, are closely linked, with degradation seen as the precursor to deforestation (Kissinger, Herold and De Sy, 2012).

Drivers of deforestation and forest degradation are said to be human activities that affect forest cover and result in loss of carbon stock (Aquino, et al. 2015; Indrarto et al. 2012; Tegegne et al. 2016; Weatherley-Singh & Gupta 2015). International reports on drivers of deforestation and forest degradation divide drivers into two categories: proximate drivers and underlying drivers (Kissinger, Herold and De Sy, 2012; Weatherley-Singh and Gupta, 2015; Liu *et al.*, 2016). The proximate drivers of deforestation and forest degradation are those human activities that directly result in forest cover loss and or degradation. These have been classified to include agriculture, logging charcoal production, wood fuel extraction (Kissinger, Herold and De Sy, 2012; Weatherley-Singh and Gupta, 2015; Liu *et al.*, 2016).

The underlying drivers of deforestation and degradation are structural human activities such as poverty, lack of employment, need for extra revenue poor regulatory frameworks as well as population increase (Guidance, 2009; Pandey, Cockfield and Maraseni, 2013; Kamelarczyk and Smith-Hall, 2014).

It is worth noting that under Decision 2/CP 13; 1/CP.16 and 2/CP 17 of the UNFCCC conference of parties, all countries participating in REDD+ must conduct country-specific studies to determine the real drivers of deforestation and forest degradation within their national context. This is a precursor to the development of national REDD+ strategies or action plans (UNFCCC 2014: 2-4; Reinecke et al. 2014). Decision 15/CP.19 further reaffirms the importance of addressing drivers of deforestation and forest degradation in the development and implementation of national REDD+ strategies and or action plans (UNFCCC 2014: 41). This Decision recognizes that drivers of deforestation and forest degradation had many causes requiring unique and country context actions to address them. The Decision also notes that livelihood may be dependent on activities related to drivers of deforestation and forest degradation and that addressing these drivers was likely to have economic cost and implications for local resources and economic development (UNFCCC 2014: 41).

The findings from the literature show that many researchers and institutions working on REDD+ do not care to make a distinction between drivers of deforestation and drivers of forest degradation

when discussing the problem of forest cover loss (see Kalaba 2016; FIP & UN-REDD 2016; UNEP 2012; Sheng et al. 2016; Hervey 2012; Green & Papers 2014). They do not also explain how doing so would help in policy development. Still, other authors do not stress to make a distinction on whether a particular activity was a primary or a secondary driver but used these terms loosely when discussing deforestation (see Hervey 2012; Ministry of Environment Sweden 2014; Thompson et al. 2011).

This study observed that there was, in fact, a lack of consensus in the literature on classification, naming and rating of specific drivers of deforestation and forest degradation. This has affected how various actors estimate the contribution of drivers of deforestation or forest degradation to national forest cover loss.

5.3 Methodology

5.3.1 Data Collection

This study relied of qualitative document review and expert interviews to collect data that was used to understand the perception of different actors on drivers of deforestation and forest degradation and also to assess the focus of the strategies in relation to the problem. The documents reviewed are presented in table 4 below.

Table 4: List of Documents reviewed

Doc. No.	Document Description	Reference
1.	The Stern Review Report of 2006	Stern N. et.al (2006), Stern Review: The Economics of Climate Change, HM Treasury, London. Available at: http/mudancasclimaticas.cptec.inpe.br/~rmclima/pdfs/destaques/sternreview_report_complete.pdf
2.	UNFCC (2016) Key decisions relevant for reducing emissions from deforestation and forest degradation in developing countries (REDD+)	UNFCCC (2016) 'Key decisions relevant for reducing emissions from deforestation and forest degradation in developing countries (REDD+)', *Framework Convention on Climate Change*, (June), p. 44. Available at: http://unfccc.int/land_use_and_climate_change/lulucf/items/6917.php
3	Synthesis Report for REDD+ policymakers (2012).	Kissinger, G., Herold, M. and De Sy, V. (2012) 'Drivers of Deforestation and Forest Degradation', *A synthesis report for REDD+ Policymakers*, p. 48.

4.	UN-REDD Report on Drivers of Deforestation and forest degradation in Zambia	Vinya, R. *et al.* (2011) *Preliminary Study on the Drivers of deforestation and potential for REDD+ in Zambia. A Consultancy Report Prepared for Forestry Department and FAO under the national UN-REDD+ Programme Ministry of Lands & Natural Resources. Lusaka, Zambia*.
5.	Zambia National REDD+ strategy (2015)	GRZ (2015b) *Zambia National Strategy to Reduce Emissions for Deforestation and Forest Degradation (REDD+)*.
6.	TFCG Technical Report 26 (2010)	TFCG Technical Report (Kate, Kibuga and Samweli, 2010). Available https://www.tfcg.org/wp-content/uploads/2018/05/TFCG-and-MJUMITA-Analysis-of-Deforestation-drivers-and-stakeholders-in-Lindi.pdf
7	**CAFI** (La, 2012)	Complex and Nuanced: DRC Forestry and Forest Loss in Context: CAFI background Paper Available at file:///C:/Users/$User/Documents/CAFI_DRC_Forestry_Complex%20and%20Nuanced%20%20-%20Background%20Paper%20-%2017%20July%202017.pdf
8	CIFOR Occasional (Tchatchou, 2015)	Deforestation and forest degradation in the Congo Basin State of knowledge, current causes and perspectives (CIFOR Occasional Paper

The selection of documents that were reviewed was done based on the following reasons: Firstly, the main documents were directly talking about deforestation and forest degradation under REDD+. Secondly the documents were talking about Africa and Zambia to be specific. Therefore, the key search words that were used for such documents include: *REDD+ in Africa; drivers of deforestation and Forest Degradation in Zambia and Sub-Sahara Africa; Energy; Charcoal; agriculture as a driver of deforestation; classification of drivers; rate of deforestation; use of incentives to address deforestation and forest degradation.* The internet search involved using direct websites for identified organisations and also searches on google search engine which in most cases helped in locating actor documents.

Further, expert interviews were conducted in Zambia to capture views from the local and international experts working on REDD+ and its related areas. The list of experts and the institutions they represent is given in table 5 under chapter 4 of this thesis. The respondents in the interviews were selected from the list of people that participated in the REDD+ preparation

workshops in Zambia and those that were actively working on REDD+ as researchers or as consultants.

5.3.2 Content Data Analysis

Qualitative and quantitative content analysis was used to analyse the data from documents and interviews with the help of a computer package known as N-Vivo. The audio-recorded interviews were transcribed verbatim. The analysis began with the creation of themes and codes from the scripts and documents. This involved reading and re-reading through the scripts and identifying and gathering parts of the content into meaning units. The meaning units were then placed under specific themes and assigned codes. The whole process of coding allowed flexibility in processing the data comprehensively. The same approach that was used in the analysis of interview data was applied in analysing documents from selected international REDD+ actors. The selected actors were chosen based on their active role in the designing and implementation of REDD+ programmes in Zambia as well as their contribution to synthesis report of the IPCC. A systematic internet search for documents was therefore applied in arriving and selecting documents for review.

The codes used in the analysis included: classification of drivers of deforestation; naming/description of energy led drivers of deforestation and forest degradation; rating of drivers and; policy focus of drivers of deforestation and forest degradation. The analysis, therefore, was assessing how the selected REDD+ actors understood the problems that were driving deforestation and forest degradation and how this understanding was shaping the strategies for addressing them.

5.4 Results from Expert Interviews on Drivers of Deforestation and Forest Degradation

A total of forty-seven (47) experts from different institutions were interviewed between 2015-2018. Table 5 below provides the list of institutions that were represented by the selected experts in natural resource management and general environmental management in Zambia.

Table 5: List of Experts that were interviewed in this study and organizations they represented

INSTITUTIONS/ ORGANISATION REPRESENTED	NUMBER OF PERSONS INTERVIEWED
Forestry Department	11
Agriculture	8
Academia	4
Zambia Environmental Management Agency	2
REDD+ Policy Consultants	3
Local Civil Society	3
Energy Sector (ZESCO, ERB)	9
Local Community Actors	7
Total	**n= 47**

The findings from the content analysis presented in table 10 in appendix 1 shows that local experts in Zambia felt energy and agriculture were the main drivers of deforestation and forest degradation and could not easily separate the two drivers to show which one was top most. However, for those who could separate the two drivers, it is clear that energy was considered as the top most drivers of deforestation and forest degradation and agriculture as second.

From the meaning units presented in table 10 appendix 1, it can be observed that the experts did not care to separate the drivers as falling under 'deforestation' or falling under 'forest degradation' in their responses.

The experts who felt that energy was the main driver of deforestation in Zambia attributed this to the challenges that Zambia had in providing other clean and adequate alternative sources of energy to its urban areas. They posit that people went for charcoal as the immediate substitute for hydro-energy.

> "Lack of sufficient alternative sources of energy was causing reliance on charcoal and wood as alternatives to hydropower. As you may be aware, only 22% of the people in Zambia were connected to the national electrify grid leaving 78% relying on wood fuel.

> Even the 22% who are connected are not assured constant supply and so often, they were falling back on charcoal (see table 10 appendix 1)

The production of charcoal is also seen as being linked to all other forms of both primary and secondary types of drivers of deforestation and forest degradation. Other views indicated that whether it was agriculture, construction or any reason driving the cutting down of trees, each tree that was felled was immediately used to produce charcoal (energy) in the process. This was the view from one REDD+ expert who noted as follows.

> "Often, the people involved in producing charcoal were the ones that had farms and were cutting down trees around their farms. Charcoal burners use every tree presented to them to produce charcoal" (see table 10 in appendix 1).

For those that felt agriculture was the main driver of deforestation, they pointed to livelihood and poverty challenges as the underlying reasons. One representative view was that:

> "Unsustainable agriculture practices and opening up of new land for agriculture was the main driver of deforestation. Behind this activity are the issues of livelihood of the people. They want money so that they take their children to school. Agriculture led deforestation is on the rise due to population increase" (see table 10 in appendix 1).

Another view was that traditional agricultural practices that involves the clearing of large pieces of land in the local forests including the young stands is what has a negative impact on forests.

> "Farmers move from one piece of land to another every time the fertility of the soil in that goes down. The practice permanently kills the trees" (see table 10 in appendix 1).

Other experts felt that government policy on agriculture that was structured to provide incentives to farmers in form of seed and fertilizers tended to push farmers toward increasing their agricultural land area so that they produce more and earn more money. Others respondents were of the view that the agricultural policies in Zambia did not adequately provide for addressing deforestation and forest degradation in the sector but tended to encourage clearing of new land for increased production.

> "The Farmer Inputs Support Programme (FISP) provides subsidies in form of seed and fertilizer to farmers without clear management of the amount of land the farmer was going to get. Therefore, for those that got more inputs, they wanted huge pieces of land for them to produce more" (see table 10 in appendix 1).

> "The national agriculture policy as included in the national vision 2030 plans to increase agriculture production by adding over 90, 000hactors of land to the current agricultural land" (see table 10 in appendix 1).

Another expert was of the view that institutional and policy disorganization was contributing to the increase in deforestation and forest degradation in Zambia. The expert felt that there was no coordination among different government institutions in governing natural resources. This is what he said:

> "The policies in the ministry of agriculture often come into conflict with forest management policies especially when it comes to land allocation. Jurisdictional issues and conflict normally come up and all these two sectors are important so to strike a balance is often difficult (GRZ/rep/FD-5).

5.5 Results from Document Analysis on Drivers of Deforestation and Forest Degradation

Many studies have presented other forms of drivers that include policy, demographics and governance challenges as underlying drivers of deforestation (Kissinger, Herold and De Sy, 2012; Weatherley-Singh and Gupta, 2015; Liu *et al.*, 2016). Most of the REDD+ literature presents these kind of drivers as secondary drivers (Kissinger, Herold and De Sy, 2012; Weatherley-Singh and Gupta, 2015; Liu *et al.*, 2016). They include poverty, settlement and industry, policy inconsistencies, lack of employment, uncontrolled fires, energy deficit and many others (Vinya et al. 2011). This study thus undertook to analyse to understand how drivers of deforestation and forest degradation are perceived. The following are the findings from the documents reviewed:

1. The Stern Review on Drivers of Deforestation and forest degradation

The stern review report is one of the highly influential reports in the history of REDD+. It was sanctioned by the UK government and provides critical recommendations that have gone on to shape the global REDD+ mechanism. The following are the findings from the review focusing of deforestation and forest degradation:

In discussing deforestation, the Stern Review report mentions only drivers of deforestation twice (2). It does not mention forest degradation anywhere in the report. This is what it says on page 549

> The nature of the drivers of deforestation implies a substantial risk that, if small areas are protected, leakage to other areas could take place and overall emissions would not be reduced. The only way this can be overcome is to have projects over a large enough area to reduce this risk and induce a genuine change to behaviour of the people involved.

The Stern report uses the term agriculture 133 time of which 107 is used directly in the main text of the report. In annex 7 of the report, it says the primary driver for land-use changes is the conversion of land from forest to agriculture. The report notes that the reasons that were driving the demand for additional agricultural land varies globally.

The Stern report also places agriculture as the main driver for land use change in Africa as well as Asia. It says:

> The main driver of land use change in Africa is primarily small-scale subsistence farming. In South America, it is large-scale farming enterprises, producing beef and Soya for export markets. In South Asia, the driver is somewhere between the two, with oil palm, coffee and timber the main products. At a global level demand for agriculture is driven by population and income. At a more local level, agricultural prices (and subsidies), infrastructure, access to markets, and land tenure can drive conversion to agriculture (Annex 7).

The report does not make reference to energy demand as a driver of deforestation or forest degradation despite using the term energy over 1000 times. The report separates energy related

sources and non-energy sources of greenhouse gas emissions. Under energy sources the report recognises transport, building, power and industry while non-energy sources include agriculture, land-use change and waste (see page IV).

The term 'charcoal' only appears 2 times in the Stern report on page (V). In both these appearances charcoal and fuel wood extraction are not considered as 'energy' related climate change problem but quickly directs it to the impact that combustion of biomass has on health. This is what the report says:

> In developing countries, 2.5 bn people depend on traditional biomass such as fuel wood and charcoal as their primary fuel for cooking and heating because it is a cheap source of fuel. The emissions associated with this biomass are relatively high because it is not combusted completely or efficiently. Aside from the climate change impact, combustion of biomass is associated with a range of detrimental effects on health, poverty and local environment including

The report further says that:

> Collection of biomass causes localised deforestation and land degradation. If animal dung is used as a fuel rather than a fertiliser, then soil fertility suffers. The widespread use of fuel wood and charcoal can mean local resources getting used up so people have to travel further to collect it.

2. The Kissinger Report

The Kissinger report on 'Drivers of Deforestation and Forest Degradation' forms part of the IPCC synthesis report for REDD+ Policymakers, that was published in 2012. This report has been extensively cited in most of the REDD+ literature, policy documents and strategies. The report investigated the drivers that lead to deforestation and forest degradation and explored the relevance of drivers in REDD+ policy development and implementation as well as key interventions to address them. It further explores the role of drivers for national forest monitoring and for developing REDD+ forest reference (emission) levels. One other important aspect about the Kissinger report is that it provides recommendations intended to support the on-going international climate negotiations, as

well as country-level plans and interventions to affect drivers of deforestation and forest degradation.

The findinings from the analsysis of this report in relation to drivers of deforestation indicate that the report has made clear and detailed definitions of what activities were driving deforestation and forest degradation. In discussing drivers the report splits these activities into two categories that is, i) drivers of deforestation and ii) drivers of forest degradation. The report uses the term deforestation 226 times of which 188 times is in the main text. The report futher disuesses drivers of deforestation as failing under proximate drivers (direct drivers) of deforestation or as indirect drivers of deforestation. The report identifes agriculture as the top most proximate driver of deforestation world wide. This is what it says on page 5:

> Proximate or direct drivers of deforestation and forest degradation are human activities and actions that directly impact forest cover and result in loss of carbon stocks. Agriculture is estimated to be the proximate driver for around 80% of deforestation worldwide (pg. 5)

The report goes on to say that:

> Commercial agriculture is the most important driver of deforestation in Latin America (around 2/3 of total deforested area). In Africa and (sub)tropical Asia it accounts for around 1/3 of deforestation and is of similar importance to subsistence agriculture (pg. 5).

On forest degradation, the Kissinger report uses the phrase 71 times and discusses this activity as either falling under proximate or as indirect drivers of forest cover loss. The report identifies fuel wood collection, charcoal production as direct drivers of degradation in most parts of Africa. This is what it says:

> Fuel wood collection, charcoal production, and, to a lesser extent, livestock grazing in forests are the most important drivers of degradation in large parts of Africa and, to a lesser extent, livestock grazing in forests are the most important drivers of degradation in large parts of Africa.

The report also makes reference to energy with the term being used 21 times. In most of these times energy is the term is used in reference to oil and fuel wood. The report recognises the significant increase in consumption of wood for energy in Africa and Latin America. It says:

> There have been significant regional shifts in the patterns of fuel wood use globally in the past 15 years, with wood for energy having increased significantly in Africa and Latin America (pg. 15),

It also recognises that fuel wood remains a major source of domestic energy for most of these countries. This is what the report says:

> Fuel wood will remain a major source of domestic energy for some time and domestic fuel wood use is expected to remain relatively stable over the next 20 years, while the demand for charcoal is likely to increase due to an expected increase in urbanization, as urban inhabitants use more charcoal than rural ones

The Kissinger report provides an analysis of the proposed interventions or strategies by most developing countries to address drivers under REDD+ on page 19. The report found that most strategies of about 55% were proposing sustainable forest management and use of fuel wood efficient cook stoves as measures to address deforestation and forest degradation. Agroforestry and agriculture intensification strategies are set at 42 and 32 respectively. What is interesting to note is that report found that only 13% of the suggested strategies in most REDD+ national strategies were suggesting promotion of alternative sources of energy to wood fuel (Table 3.1, pg. 19 of the Kissinger Report).

3. **UNFCCC (2018) Key decisions relevant for reducing emissions from deforestation and forest degradation in developing countries (REDD+)**

The report is a compilation of conference decision starting from decision 2/CP 13 up to decision 18 CP/21 on REDD+. These decisions have been used extensively as guidelines in the development of REDD+ national strategies by REDD+ implementing countries. An analysis of the report on drivers of deforestation and forest degradation revealed the following findings:

On deforestation, the report covered the word **51 times** and emphasises the need to address activity by dealing with its drivers. The decision recognises the complexity of the problems and differences in drivers of deforestation in different countries. It says:

> Recognizing the complexity of the problem, different national circumstances and the multiple drivers of deforestation and forest degradation (pg2)

On forest degradation, the report uses this phrase **31** times and in the same way it talks about deforestation, the report recognises the connectivity of drivers of degradation to livelihoods.

The decisions in the report have focussed on the idea of using what it terms as positive incentives to address both deforestation and forest degradation. The decisions do not however mention the actual drivers or activities driving deforestation and forest degradation as it mainly focuses on providing guidelines for the implementation of REDD+ as a mechanism for addressing greenhouse gas emissions from forest cover loss. For example, the report says this on page 14:

> Recalling the principles and provisions set forth in decision 1/CP.16 and its appendices I and II on policy approaches and *positive incentives* on issues relating to reducing emissions from deforestation and forest degradation in developing countries and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

4. UN-REDD+ Report on Drivers of Deforestation and Forest Degradation in Zambia by Vinya et.al (2011)

The UN-REDD+ sanctioned report on drivers of deforestation and forest degradation in Zambia was prepared by Vinya et.al (2011) as one of the initial requirements in the process of developing a national REDD+ strategy. The report makes interesting findings on the activities that were behind the increasing rate of forest cover loss in Zambia.

A qualitative analysis of the report in line with its presentation of drivers was undertaken and the following are the findings:

The report uses the term deforestation 149 times and discusses it under different factors that were driving it. Among these factors is poverty, agriculture expansion and charcoal production. This is what it says:

> The proximate drivers of ***deforestation*** in Zambia are shifting agriculture, agricultural extensification, *charcoal production, fuel wood collection,* logging, settlements, uncontrolled fires, industrialization and urban expansion (pg. 15).

Notice that the report places charcoal production and fuel wood extraction under drivers of deforestation in contrast with the Kissinger report (2012) and the UNEP (2014) report that considers charcoal production as a driver of forest degradation.

On degradation the report uses the phrase 23 times and does not discuss drivers of forest degradation separately from those driving deforestation. In all the areas were the term forest degradation is used, it is used together with the term deforestation. This shows the lack of care to treat deforestation and forest degradation as separate challenges requiring different approaches to be addressed.

The report also introduces a phrase called 'forest cover loss' is used 11 times. The phrase in a way captures both deforestation and forest degradation. The report thus places agriculture as the main driver of forest cover loss in Zambia. This is what the report says in one of the sections:

> Large-scale agricultural systems and shifting cultivation have been seen to be the major causes of forest cover loss. Slash-and-burn, semi-shifting cultivation practices in areas where population density is high (e.g. Southern and Northern provinces) results in a slow regeneration process, thereby affecting forest cover (pg. 24).

The report uses the term 'energy' 19 times while the term 'charcoal' is used 36 times. It uses the term fuel wood 19 times in the discussion of drivers of deforestation and forest degradation. The report associates the high demand for energy in urban areas with increased production of charcoal in the country. It notes that fuel wood extraction was contributing about 3% to the countries annual GDP and was a major source of household energy in the country.

> Generally, the increase in charcoal production is propelled by high energy demand in the country's urban centres. Fuel wood production is estimated to contribute at least 3 per cent

> of the country's GDP, and accounts for approximately 80 per cent of the economy's total energy household balance (pg. 23)

Charcoal according to the report, had a significant contribution to the nation's economy creating about 500,000 jobs through its production and supply chain. This is what the report says

> Charcoal use therefore has socio-economic benefits for numerous actors along the chain, from producers in rural areas to consumers in urban areas. Production distribution and marketing of charcoal employs up to 500 000 people (pg. 23)

However, while the report has shown the contribution of agriculture to the countries rate of forest cover loss, it does not do so for energy (charcoal or fuel wood). The report in its recommendations, however, provides for the need to find alternative sources of energy to fuel wood. In particular, the report suggests bioenergy as an alternative:

> The high levels of fuel wood used in Zambia point to the need to re-plan and manage the country's energy sector. Bioenergy presents an alternative modern and more efficient use of biomass energy. It involves converting the sugary and starchy part of a given plant, or the oil in fruit, into liquid. Zambia has various types of bioenergy material (plant materials, twigs, leaf litter, agricultural residues and dung) that may be exploited for bioenergy production (pg. 33)

It goes further to suggest that the reduction in charcoal use by turning to improved charcoal stoves and also improving the charcoal production method. This is what is says:

> Reducing the impact of charcoal production and consumption on woodland cover would also require the use of improved stoves such as Jiko and Rocket models. These stoves have high combustion and heat transfer efficiency. They can be purchased at low and affordable prices. There is also a need to improve charcoal production methods (pg.33)

5. **Making REDD work for communities and forest conservation in Tanzania TFCG Technical Report 26 Analysis of the drivers of deforestation and stakeholders in the Lindi project site (2010)**

The TFCG report is an analysis of drivers of deforestation and forest degradation in Tanzania. The report says that understanding the drivers of deforestation and forest degradation was critical if we are to address those drivers effectively (pg. 54). The report thus lists agriculture as the main driver of deforestation in Tanzania. It says:

> Agriculture is the main driver of deforestation, in the form of shifting cultivation, which is practised by most farmers. Farmers choose an area of the forest (untouched forest is better than regenerated forest), clear it and grow their crops there for a number of years, then abandon the shamba and go and clear another place

On charcoal the report says that charcoal was the main source of income for many. It acknowledges that in some places, trees that are cut during clearing of land for agriculture were just burnt and never turned into charcoal in most villages. This is what the report says:

> In most villages, although many trees are cut down during the process of shifting cultivation, they are mostly burnt and very few people make charcoal (small amounts are made in Mkombamosi and Mkanga 1). But in Likwaya almost everyone makes charcoal and it is the main source of income for many, while some make it when they need extra.

The report further says charcoal was a main source of livelihood for at least 1/3 of the young men in some communities. It says:

> A group of young men estimated that out of their school class of around 30, ten people gain their livelihoods entirely from charcoal. And such people would make around 5-6 mounds of charcoal a year.

6. **Complex and Nuanced: DRC Forestry and Forest Loss in Context by CAFI (2008)**

The document says that in order to address forest cover loss there was need to understand what was driving it. It says these drivers influence each other and their dynamics changes over time.

The report also emphasises the need to address the drivers holistically and not treating the symptoms (pg. 23) it suggests the following ways as solutions to the problem:

- Tackle all the direct AND underlying causes of forest loss across all sectors and over the whole national territory
- Implement programs and support reform processes to create environments conducive to forest friendly economic development
- Identify and promote explicit win-win development-forests interventions - or at least win-"lose-less-forest" scenarios
- Broker trade-offs between divers and sometimes conflicting interests among various actors and sectors, and translate those trade-offs into land use that account for the forest capital of the country
- Capacitate forest dwellers, indigenous peoples and the government to level power and knowledge asymmetries and enable a better outcome for forests and people.

The report suggests that for REDD+ to achieve the desired results there was for the government to combine and sequence the different sectorial interventions. This is what it says:

> Successfully achieving the desired results depends on the capacity of the DRC government to combine and sequence the different sectorial interventions together to mitigate rebound effects (such as agricultural investments triggering further forest clearing) and create mutually enabling conditions that will facilitate forest-conscious sectorial investments. Therefore, CAFI does not support project-based approaches or programs that only concentrate on one direct driver of forest loss without simultaneously addressing other interconnected direct drivers (such as wood energy, timber and slash-and-burn agriculture on the same plot) or improving the enabling environment (land use and tenure rules, governance or fiscal policies). The latter are important not only to ensure the sustainability of the results but also to avoid or reduce the rebound effect.

The report says agriculture and charcoal production were the main drivers of deforestation and forest degradation. This acknowledgement is reflected in the organisations support structure which shows over 66% of the finances towards addressing agriculture and forest sector at 26.9%. Investment in sustainable energy was third at 28%.

7. **Deforestation and forest degradation in the Congo Basin State of knowledge, current causes and perspectives (CIFOR Occasional Paper)**

In discussing drivers, the occasional paper by CIFOR places these activities into two categories that is, i) drivers of deforestation and ii) drivers of forest degradation. The report uses the term deforestation. The report further discusses drivers of deforestation as failing under proximate drivers (direct drivers) of deforestation or as indirect drivers of deforestation. The report identifies agriculture as one of the main driver of deforestation in the Congo Basin. This is what it says:

> The Congo Basin displays a historical rate of deforestation that is relatively low in comparison with other areas of the planet. However, this rate is already increasing and requires control. If one considers the many pressures on the forest areas, such as increasing demands for agricultural land, mining and other sectors

On wood says that over 80% of the population in most of these countries had no access to electricity and as such relied on fuel wood and charcoal for their energy need. The report acknowledges that the use of wood fuel would continue for the years to come. This is what is says:

> The use of fuel wood and charcoal will continue to be essential in the next few decades, both in the cities and in rural areas of most developing countries.

The paper further highlights the different use of wood energy and national demands of three countries; The DRC, Cameroon and Congo Brazzaville: This is an excerpt:

> In Cameroon, the annual consumption of wood energy in urban areas is estimated at 2,203,496 tons for firewood and 356,530 tons for charcoal; all for a turnover estimated at 188.33 billion CFA francs per year. It is estimated that, in rural areas, the population consumes annually approximately 4 million tons of firewood that they collect directly from surrounding vegetation, representing an estimated value of 77.8 billion CFA. In terms of monetary value, this amount is, however, lower if one takes into account the various costs related to transportation and marketing. Charcoal plays a marginal role in the satisfaction of energy needs of the households (Atyi et al. 2013).
>
> In Congo, commercialization of wood energy is not yet formal and is still considered as part of the subsistence economy. The forecasts indicate that only 55% of urban households

and 25% of rural households will be able to have access to electricity by 2025 (Republic of Congo 2011a). The use of fuel wood and charcoal will continue to be essential in the next few decades, both in the cities and in rural areas.

In CAR, the Strategic Document for Growth and Poverty Reduction (Republic of Congo 2008– 2010) states that, currently, wood represents nearly 87.7% of the energy consumption. In addition, the heavy concentration of population in the commune of Bangui (800,000 inhabitants, representing 20% of the total population) results in a steady increase of wood energy needs and food products, which in fact contributes to deforestation and forest degradation around the city (Tchatchou, 2015: 21)

8. The National REDD+ strategy for Zambia: Key Features on Drivers of Deforestation and Strategy Focus

Table 6 below shows the findings from the document analysis of Zambia national REDD+ strategy reflecting the identified drivers, the objectives of the strategy and the identified key institutions as well as proposed sources of finance. The table further shows the type and focus of the strategies developed to address the identified drivers of deforestation and forest degradation in Zambia. The presentation of findings for this document is different from the other four presented above owing to the fact that this is the guiding document for implementation of REDD+ in Zambia.

Table 6: Key Features of the National REDD+ Strategy for Zambia

Drivers of Forest Cover Loss	**REDD+ Objectives that correspond to the Driver**	**Sector & Institutions Represented in REDD+ Process**	**Proposed Strategies**
Logging/Timber Harvesting: Uncontrolled harvesting and encroachment of the protected areas Exploitation and unsustainable harvesting methods of forest concession areas Exploitation and unsustainable use of forests in open areas Uncontrolled forest fires	**OBJ-2:** By 2030, selected high-value forests in open areas are effectively managed and monitored **OBJ-3**: By 2030, all timber concession areas have management plans that are enforced and monitored with the full participation of local communities;	**FORESTRY** -Forestry Department -ZEMA -Traditional leaders	Enhancing participatory approaches and traditional authorities' role in forest management Developing generic cost-benefit sharing principles for management of forests Engaging traditional leaders and local communities in timber concession management. Strengthening local institutions for forest concession management Creating an independent monitoring unit for a timber concession

Agriculture: Extensive and unsustainable crop production practices Poor livestock management practices Agro-processing reliance on wood fuel Lack of incentives for agricultural intensification Use our land preparation	**OBJ- 4:** Good agricultural practices that mitigate carbon emissions adopted	**AGRICULTURE** -Forestry Department -Agriculture Department	Provision of performance-based incentives for climate-smart agricultural practices that mitigate carbon emissions Promotion of climate-smart agricultural practices related to production Promotion of good agricultural practices related to reduced emissions from agro-processing dependent on the use of wood fuel from indigenous forests
Wood Energy Firewood Felling of trees for charcoal production Use of charcoal and firewood as the main source of energy	**OBJ- 5:** Regulated production of wood fuel (charcoal & firewood) and its improved utilization in place **OBJ-6**: appropriate and affordable alternative energy sources widely adopted	**ENERGY** -Forestry Department -Energy Department	Enhancing models for sustainable and regulated wood fuel production Promotion of energy-efficient wood fuel utilization technologies Promotion of alternative renewable energy sources (solar, geothermal & hydro) Promotion of smart incentives for alternative energy sources adoption.
Industrial expansion: Felling of trees to create space for mining site and settlements for labor Harvesting of timber for mining infrastructure Clearing of forests and pollution of the environment from mine effluents detrimental to biodiversity integrity	**OBJ-8:** mining industry contributing to the management of surrounding indigenous forests and establishment of forest plantations for own timber needs	**MINING** -Forestry Department -Mining	Enforcing the Environmental Management Act (2011) to protect threatened and sensitive protected areas Harmonizing existing legislation in order to address overlapping concession/ licensing systems Developing guidelines for PA classification Encouraging the mining industry to invest in forest plantation establishment to meet own wood needs. Enhancing the Mining industry compliance to Strategic Environmental Assessment
Unplanned Land Use: Unplanned land use that has no regard for forest integrity and biodiversity conservation	**OBJ-9:** land and resource rights on customary land legislated and secured; and **OBJ-10:** Relevant institutions capacitated to enable them to plan, manage, implement and monitor REDD+ programme activities.	**LAND USE** -Traditional leaders -Local communities -Lands Department -Ministry of National Planning -Forestry Department	Developing integrated land use plans that are compatible with sustainable management of forests to guide infrastructural development Supporting efforts towards ratification of the Customary Land Bill, Forest Bill and Urban and Regional Planning Bill 1 Developing institutional and stakeholder capacities to implement and monitor REDD+ Developing REDD+ benefit sharing models Developing MRV and Safeguards Information Systems for REDD+ programme in Zambia.

Classification of Drivers

The Zambia National REDD+ strategy also discusses drivers as either falling under drivers of deforestation or forest degradation. The strategy, however, opts to use the term forest cover loss when comparing the contribution of each driver to the problem of deforestation and forest degradation (GRZ, 2015b). The strategy further separates drivers in sectors and says:

> The proximate drivers of deforestation and forest degradation in Zambia are specific to its forestry, agriculture, energy, mining, and land use (infrastructure development) sectors (pg:3)

Agriculture, mining, and infrastructures development are classed under driver of deforestation while wood fuel (energy), logging and fires classified as a driver of forest degradation (pgs. 15-20).

It is clear to note the classification system used in Zambia is like the way international actor involved in REDD+ have adopted to classify drivers of deforestation and forest degradation.

Naming and describing Wood Energy Driven Deforestation in the Strategy

The Zambian strategy also uses terms such as charcoal production, wood fuel extraction in describing various forms of use of wood energy for cooking and heating, as a driver of forest cover loss. This is the same naming system used by international REDD+ actors and other REDD+ participating countries in Africa discussed earlier. The strategy uses these terms and says:

> The significance of *charcoal's* contribution to forest degradation is exemplified by the estimates amounting to 144662 hectares per annum of woodland required to produce *charcoal* in four provinces of Zambia out of the nine provinces. *Firewood* is in high demand especially in rural areas for cooking and heating needs at the household level and also among tobacco farmers especially those producing Virginia tobacco which requires smoke curing as well as for brick burning in the booming construction of houses in the rural and peri-urban areas of rural towns (GRZ 2015: 15).

It was also found that unlike most international actors and other African countries participating in REDD+ the Zambian national REDD+ strategy had made significant attempts to use the term 'energy' in describing wood energy driven deforestation. For example:

> The proximate drivers of deforestation and forest degradation in Zambia are specific to its forestry, agriculture, *energy*, mining, and land (GRZ 2015: 3).
>
> Implementation of the national REDD+ strategy will focus on tackling different drivers of deforestation in both the forestry and other identified key sectors, agriculture, *energy*, mining and land use (GRZ 2015: 8).
>
> Charcoal is an important source of *energy* for both rural and urban populations in Zambia and it is estimated that 98% of low-income families (which make up 85% of the urban population) depend on charcoal as their main *energy source* (pg. 15)

The Zambia strategy clear links deforestation driven by charcoal to the increasing demand for energy in urban centers. It is clearly for this reason that the Zambian strategy proposes in its strategic intervention to explore options of investing in alternative clean sources of energy such as solar, geothermal and hydro in order to replace the use of wood fuel.

Rating of Drivers in the Zambian REDD+ Strategy

The Zambian strategy places agriculture as the main driver of *deforestation* while wood fuel is the main driver of *forest degradation*. The strategy, however, says that wood fuel was the main driver of forest ***cover loss*** responsible for over 144, 662 hectares of degradation annually**.**

> The significance of charcoal's contribution to forest degradation is exemplified by the estimates amounting to 144,662 hectares per annum of woodland required to produce charcoal in four provinces of Zambia out of the nine provinces (GRZ, 2015: 15).

The strategy places agriculture as the second driver of *forest cover loss* in Zambia and implicates this to a growing demand for agricultural land from a growing population.

> Agricultural expansion is the second highest driver of forest loss in Zambia. A growing population has led to increased pressure for agricultural land to meet national and subsistence food requirements. Agricultural expansion is caused both by shifting subsistence cultivation and intensification of subsistence and commercial farming (GRZ, 2015: 15)

There is, however, a contradiction in the strategy as it also says at one point that agriculture was the largest driver of forest cover loss in Zambia responsible for over 90% of forest cover loss:

> Agricultural expansion is estimated to account for up to 90% of forest cover loss, often for small-scale farming systems using shifting cultivation practices (GRZ, 2015: 15).

These findings on the rating of drivers in terms of contribution to the loss of forests in Zambia clearly suggest that there were problems in understanding which activities were more problematic. It is evident from the analysis of the document that the problem of classification had affected the rating of drivers of deforestation and forest degradation.

The Focus of Strategies in the Zambia REDD+ National Strategy

The focus of the Zambia, REDD+ strategy is on addressing drivers of deforestation and forest degradation by improving community livelihoods. The strategy provides many interventions including agroforestry, afforestation, the introduction of efficient charcoal stoves, exploration of alternative sources of renewable clean energy and establishing of woodlots as strategies to address forest cover loss. It further suggests improved land use planning and governance as other areas of intervention to better manage the forest resource. The strategy further emphasizes the need for equitable sharing of carbon benefits. The goal is:

> To contribute to national reductions in greenhouse gas emissions by improving forest and land management and ensure equitable sharing of both carbon and non-carbon benefits among stakeholders (GRZ, 2015:23).

On addressing energy driven forest cover loss, the strategy suggests the use of what it calls ‘smart incentives’ to support efficient charcoal production and adoption and use of efficient energy stoves. It says the underlying reason behind this strategic intervention was the need to make the sustainable charcoal option fit into the desired REDD+ outcome.

> Underlying this strategic intervention is the need to make the sustainable charcoal production option fit into the desired outcomes of REDD+ strategy that addresses both emissions reduction and economic development (GRZ, 2015:29).

The strategy, however, suggests that promoting the use of charcoal stoves faced a risk of low adoption due to high costs of the technology and if made cheaper more people would switch to them and consequently increasing the demand for wood energy. Thus, the Zambian strategy has

suggested investment in alternative sources of clean renewable energy to serve as an alternative to charcoal and wood fuel. It says:

> Improved wood fuel utilization technologies could lead to more people switching to using wood fuel and thus exacerbating deforestation and forest degradation. This could be mitigated through the promotion of affordable alternative renewable energy sources such as solar, biogas, Liquefied Petroleum Gas (LPG) and wind backed by a detailed diagnosis of the socio-economic circumstances in the targeted areas (GRZ, 2015: 30)

The strategy goes on to say that introducing smart incentives in form of government subsidies and taxes that make the alternative forms of energy affordable for the communities would help stop increased use of wood energy:

> There is a risk of low adoption of alternative renewable energy sources due to the high cost of the technologies. This could be mitigated through deliberate subsidies by the Government on alternative renewable technologies and through smart partnerships with the private sector (GRZ, 2015:31).

On addressing agriculture led deforestation and forest degradation, the Zambian strategy suggests the provision of performance-based incentives to promote climate-smart agricultural practices. It further suggests the promotion of good agricultural practices related to reduced emissions from agro-processing dependent on the use of wood fuel from indigenous forests (GRZ, 2015: 29)

The Zambia REDD+ strategy suggests interventions to address identified drivers, especially those driven by energy in which it says there was need to find alternative sources of energy. However, the greatest challenge the strategy faces is on accessing finance to support interventions such as investment in cleaner sources of energy such as solar and geothermal.

The strategy also makes a great reference to use of smart performance-based incentives clearly indicating that the success of the strategy is largely dependent on the provision and access of these incentives to motivate forest communities to engage in activities that are less harmful to forests. This also reflects the greater attempt to ‘shoehorn’ the strategy into the international concept and requirements for REDD+.

5.6 Discussion

This study has examined how drivers of deforestation and forest degradation are defined and understood as well as the strategies that are being proposed for addressing them by actors involved in REDD+.

What should be noted from the onset is that developing country parties participating in REDD+ are required, when developing and implementing their national REED+ strategies or action plans to address the activities that were driving deforestation and forest degradation. Therefore, failure to properly define the problems driving forest cover loss had the potential of negatively affecting the nature and effectiveness of the strategies for handling them.

The results from content analysis of expert interviews indicate that most experts consider energy demand as the main driver of both deforestation and forest degradation. The experts do not care to place energy (charcoal and firewood) under deforestation or under forest degradation. It is instead considered as falling in the same box as agriculture and other drivers. The reason given for this position is that charcoal producers are no longer selective on the type of tree they are harvesting but are cutting any tree or part of tree they could find nearby to produce charcoal and meet the demand for energy. With dwindling forests around urban areas in Zambia (Vinya et. al, 2011) and with increased demand for energy, any tree that is cut either when clearing land for settlement or for agricultural purposes, is converted to charcoal immediately. This unlocks and releases the carbon into the atmosphere within hours. The production of charcoal is also noted by many documents as being the most frequent driver of deforestation and forest degradation. Based on this reality, this study argues that charcoal production to meet the increasing demand for energy in urban areas was more a problem in terms of GHG emissions than any other driver of deforestation and forest degradation. This therefore calls for a need to reclassify drivers by looking at their total contribution to emissions than just removal of carbon sinks.

The analysis from the documents show a slight difference in the way drivers are classified and presented from the way experts interviewed discuss them. In most documents that were analysed, agriculture is considered as the driver of deforestation only while wood energy is considered as a primary driver of forest degradation only (Kissinger, et al. 2012; Vinya et.al 2011). Because agriculture is considered as the main biggest problem in terms of driving deforestation and forest degradation, most actors in REDD+ at global level as well as local level (Zambia), have gone on

to give much attention to addressing agriculture and consequently underappreciating wood energy (charcoal and wood fuel). This attention is noticed in the many suggested strategies that focus on addressing agriculture driven deforestation and provides localised solutions to wood energy such as provision of charcoal efficient stoves and or introducing efficient ways of producing charcoal. The solutions under REDD+ don't address the energy demand in nearby urban areas that was in fact the main driver of deforestation and forest degradation in countries like Zambia. However, this skewedness in strategy could be partly a consequence of the recommendation by the UN-REDD+ which said that while there were many drivers of deforestation, attention should be given to addressing the causes of the on-going conversion of tropical forests to other land uses especially agricultural land (FAO, 2010: 1). It could also be because at design REDD+ was considered a non-energy mechanism whose attention was to address carbon emissions resulting from land-use change.

While there are a number of efforts supported by the international community in the area of investing in alternative sources of energy (solar, wind or geothermal), this study has observed that these efforts are not linked to the REDD+ mechanism. In most cases they are financed in form of loans and grants. Even though such investments would result in significant avoidance of deforestation and forest degradation, the REDD+ mechanism seems to pay little attention in advancing such strategies as is the case in Zambia and other developing countries. This thesis argues therefore that for REDD+ to succeed in countries like Zambia, there was need for the mechanism to embrace and support solutions that would address poverty, unemployment, low investment in alternative energy sources and low levels of access to clean sources of energy that were mainly behind this driver. These challenges are not only in the forest community that REDD+ targets but highly prevalent in urban areas that were the main markets for wood energy.
Without a large-scale switch to non-wood fuels, any REDD efforts that focuses mainly on protecting forests through governance or woodlots or improved farming, are likely to be sub-optimal at best in countries like Zambia.

The study therefore suggests that there be a rethink in the way drivers of deforestation and forest degradation are defined under REDD+ or the mechanism will fail to reflect the correct mix of institutions as well as develop effective strategies that target right areas needing intervention. Failure to do this will lead to failure in addressing the fundamental drivers of deforestation and

forest degradation and subsequently lead to failure in meeting the central objective of reducing GHG emissions as set out by the UNFCCC. This finding agrees with Robinson et al. (2019) who highlighted the need to take into account whether the drivers of forest loss are internal or external to a particular forest landscape, when determining the best approach to implementing REDD+; and La, (2012) who suggests that to halt drivers of deforestation and forest degradation there was need to address the drivers holistically and not treating the symptoms only.

6 CHAPTER SIX: INCENTIVES IN REDD+

6.1 Introduction

This chapter addresses the question on the use of incentives as suggested in REDD+ and the extent that these can help address deforestation and forest degradation in countries like Zambia. The chapter uses the results from expert interviews as well as from document analysis to make inferences. Further analysis of selected REDD+ projects with the focus on incentives and their focus in addressing drivers of deforestation and forest degradation is done. The chapter shows that suggested incentives will have little impact on addressing deforestation on account that they are inadequate, unsustainable, unreliable and targeted to support strategies that do not address the real problems that were driving forest cover loss in countries like Zambia. The chapter will show that although REDD+ incentives were designed to support alternative livelihoods for forest communities, there was little this would do in reducing deforestation and forest degradation unless demand for wood energy coming from urban areas was adequately addressed. What is clear is that the incentives at present are to a large extent localised to a particular forest community and target at particular solutions that do not address the real problem, in this case energy demand. The chapter argues that in the absence of serious investment in alternative energy sources to address the ever-growing demand for energy in urban areas, the REDD+ incentives will have very little impact in ending deforestation and forest degradation.

6.2 Background: The Nature of the Incentives under REDD+

The use of money in the form of incentives by developed nations to reward developing countries that have demonstrated reduction or avoided emissions by addressing drivers of deforestation and forest degradation, is the underlying principle on which the success of REDD+ is promised (Deheza and Bellassen, 2012; Evans, Murphy and de Jong, 2014; Korhonen-Kurki *et al.*, 2014; Rantala and Di Gregorio, 2014; OECD, 2015). The UNFCCC decision guides that REDD+ programme shall be organized as incentive-based approaches to forest protection and conservation (Deheza and Bellassen, 2012; UNFCCC, 2014, 2015b). Reducing Emissions from Deforestation and Forest Degradation (REDD) is therefore an effort to create a financial value for the carbon *stored in forests*, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development (GEF 2010: 8).

Two types of financial incentives exist under REDD+ programmes (GCP, IPAM, FFI and UNEP FI, 2014). Firstly, is the grant given to a country that successfully applies and gets accepted as a REDD+ participating country. The purpose of this incentive is to help the REDD+ participating countries prepare for full participation in the global REDD+ carbon trading markets. The finances are often provided by developed countries through bilateral or multilateral agencies (Unep, 2011; Battaglino *et al.*, 2013). The UN-REDD+; the Forest Carbon Partnership Facility (FCPF) of the World Bank; and the Global Environmental Fund (GEF) have been the leading institutions in providing finances as well as technical guidelines to developing countries participating in REDD+ for this exercise (GCP, IPAM, FFI and UNEP FI, 2014; FIP and UN-REDD, 2016; Rakatama *et al.*, 2016). The expected output from the REDD+ participating country that receives this incentive is to develop a National REDD+ strategy document that identifies the drivers of deforestation and provides actions for addressing them.

The second form of financial incentive under REDD+ is performance based. This incentive is the basis on which the future and success of REDD+ are promised (Sunderlin *et al.*, 2014). It is expected to be delivered at the second and third phases of the REDD+ implementation plan. International climate finance agencies including the GEF, FIP, also provide financing for specific activities related to REDD+ programme at these levels of implementation taking place in developing countries. The GEF focuses its activities particularly on the implementation-phase of REDD+ by supporting the following activities: developing national systems to measure and monitor carbon stocks and fluxes from forests and peat lands, strengthening forest-related policies and institutions, developing policy frameworks to slow the drivers of carbon emissions from deforestation and forest degradation, establishing innovative financing mechanisms and piloting projects to reduce emissions from deforestation and forest degradation. In addition, the GEF is strongly supporting work with local communities to develop alternative livelihood methods to reduce emissions and sequester carbon. Under special circumstances, the GEF may also finance REDD+ Readiness activities (GEF 2010: 6).

The performance-based incentives, therefore, constitute payments made to a nation or forest community (project level) that has demonstrated efforts that result in avoiding deforestation or that enhance the forest carbon stock. The finances are expected to come from the sale of carbon at the carbon markets and thus require some measurement and verification by technical experts to

determine whether the community or country has some stock to sell or not as well as the price due if any. The risk associated with results based incentives is that a country may not get anything in case of underperformance even as a result of causes beyond the control of the project developer.

A country could be at risk of a negative balance as a result of the risk of under-performance at two levels: i) at the project level due to the risks inherent to forestry investment, to events beyond the control of the project developer, and to technical problems that may become apparent at the design, development or implementation stage of the project concerned; ii) at the national level for reasons linked to the performance of public programmes, to government policy (regulatory risks) or to breaches of contract (Deheza & Bellassen 2012: 12)

The focus of REDD+ incentives is to support forest communities to seek other forms of livelihoods that are less harmful to trees. National REDD+ strategies that have so far been developed proposes to use such activities as agroforestry, afforestation, reforestation beekeeping, use of efficient charcoal stoves and handicrafts as viable alternative forms of livelihood that could be supported by the REDD+ financial incentives. It is hoped that these activities will enhance carbon stocks which will be traded and finances shared amongst community members to further support their livelihoods away from forests.

However, whether the use of incentives as suggested under REDD+ or indeed carbon markets was the best way to address deforestation has remained unanswered (Sullivan, 2011; Visseren-Hamakers and Vijge, 2012; Pasgaard *et al.*, 2016). Others have questioned the poor governance systems in a developing country and whether incentives will navigate such challenges (Evans, Murphy and de Jong, 2014; Korhonen-Kurki *et al.*, 2014; Cavanagh, Vedeld and Trædal, 2015).

Developing countries have also raised concerns on the sustainability of the carbon markets and flow of incentives and the subsequent consequences if the promised funds were not honored (Sunderlin et al. 2014).

This study therefore sought to find out the extent to which REDD+ incentives could help address the drivers of deforestation and forest degradation and consequently help the mechanism meet its central objective.

6.3 Methodology

6.3.1 Data Collection

The data used in this study was qualitatively obtained through document review and expert interviews. The principle documents that were analysed are: The National REDD+ strategy for Zambia; and the Kissinger Report on Drivers of deforestation and forest degradation (see table 4 in chapter 5 for the list of documents that were analysed). Content analysis techniques were used to understand how actors perceived the idea of using incentives to address deforestation and forest degradation and whether this strategy would actually help archive the central objective of reducing emissions from forests. The experts were asked to compare the current incentive based REDD+ with past or current programs designed to address deforestation and forest degradation but also on the differences that the incentive based REDD+ strategy was proposing when compared to past interventions.

6.3.2 Content Analysis

Qualitative and quantitative content analysis was used to analyse the data from documents and interviews. The audio-recorded interviews were transcribed verbatim. The analysis began with the creation of themes and codes from the scripts and documents. This involved reading and re-reading through the scripts and identifying and gathering parts of the content into meaning units. The meaning units were then placed under specific themes and assigned codes. The whole process of coding allowed flexibility in processing the data comprehensively. The analysis main objective was to understand whether the as suggested incentives under REDD+ would effectively address the drivers of deforestation in countries like Zambia. Therefore, the analysis explored the following themes from the interview scripts: REDD+ guidelines and Rules for accessing Incentives; Sustainability and certainty of incentives; effect of incentives on livelihood and job creation; and incentives, good governance and corruption.

6.4 Results from local Experts on REDD+ and Incentives in Zambia

6.4.1 REDD+ Guidelines and Rules for Accessing Incentives

The findings from the expert interviews from Zambia as can be seen from table 13 in appendix 1 of this thesis indicate that most experts interviewed in Zambia felt that the REDD+ financial regime and its associated rules and conditions would not help address the problem of deforestation and forest degradation in country like Zambia. These views are informed by historical experience

and legacies of other similar donor-financed projects that failed to live up to their expectation in as far as addressing deforestation is concerned. Most experts felt that there was nothing new the REDD+ programme was promising which previous programmes on natural resources management had not tried to do. This is noted by the following statements from a REDD+ consultant and a government representative in the forest department of Zambia:

> "Most of these ideas end up as statements in the documents rather than actions on the ground. Funds from donors are not sustainable. You need to understand that government to government relations work on politics and if there is regime change or government falls out of favor of the donor country, the money also stops coming. This means the end of the project" (See table 13 in Appendix 1).

> "In often time, the donors will give government conditionality's for them to fund programmes and if the government fails to meet those conditions, there is serious evaporation of donor funds. A good example is the HIPIC completion point programme that had a lot of conditions. One condition under HIPIC that time Zambia was told to prepare was a national environmental policy, which the country prepared. But after the donors left, no one has cared to implement that policy" (See table 13 in Appendix 1).

Other views from experts suggest that financial had greatly influenced the shape that REDD+ was taking. The views from most experts as noted in table 13 appendix 1 clearly suggest that those who controlled the money were driving the programme in a way that ensures that their own interests were met. Some experts felt that there was so much pressure coming from the international agencies to try and influence national policy as well as institutional reforms using the financial and resource advantage over the implementing country. One REDD+ consultant said:

> "Those with the money were the ones driving the ship. Even though donors in REDD+ could be genuinely driven by the challenge of climate change, they still push their national economic interests in the conditions they set. "But because we are a poor country, we depend on what the donors say though I do not think donors should override our national aspirations" (See table 13 in appendix 1).

These sentiments are also reflected in the response given by another respondent from the forestry department of Zambia who said:

> "Land tenure in Zambia allows for the community to hold land in trust but donors and FAO have been arguing that the Zambia land tenure system does not allow private entities to participate in REDD+ because they can hold the title for a long period. This is one area where we see private institutions from the west are driving their interest to hold or acquire huge pieces of land in Zambia. We can still run REDD+ even under customary land as long as you put in place mechanisms to protect land use. But influence from some people in CSOs are bought off, taken to Europe and told to support certain land interest which is foreign from the interests of our people" (See table 13 in appendix 1).

Another respondent from the government of Zambia under the ministry of agriculture thought that REDD+ international proponents and financiers were more interested in creating business opportunities and acquiring huge pieces of land from the local people. He noted that there were many private individuals that were asking for land in the name of implementing REDD and demanded title. He felt that REDD+ was another way in which international players wanted to grab land from the local:

> "While REDD+ looks promising, there are people who look at it as an opportunity for business, others have found an opportunity to influence policy decisions to favor their interests and still others see an opportunity for land grab for their own benefit. There are people from outside who have come requesting to get land on the title so that they implement a REDD+ project. But why should they get a title when there are communities already living in that area. Why not work with those communities? It's unfair you know. The hidden interests behind REDD+ have the potential to destroy its good intent" (See table 13 in appendix 1).

It was also found that 3 experts felt that internationally funded programmes tended to create a dependency syndrome that if the finances stopped at any point, then the project stopped as well. For instance, a respondent from the Civil Society Organisations in Zambia said:

> "The problem with donor-funded projects like REDD+ is that the moment funding stops that is the end of the project" (See table 13 in appendix 1).

A government representative, on the other hand, was of the view that for REDD+ to work, finances should be locally generated and not dependent on donors. His view was that donors would not fulfill their promises as they had done in the past:

> The best way is to have the government finance such programmes as opposed to it being donor dependent. Donor funds normally have a lifespan and once they stop coming then the programme stops. They promise so much money but only releases little that also ends up with government agencies while the communities are told to wait in perpetuity (See table 13 in appendix 1).

Developed countries supporting REDD+ activities had great influence in how governments of developing countries like Zambia, were expected to implement programmes that these (developed) countries had funded. Two representative statements for this position are presented below:

> "Donors have great influence on how governments should implement their funded programmes" (See table 13 in appendix 1).)

> Donors in many cases push their own agenda rather than that of the country they were helping. Most of such programs are developed already at a higher level (See table 3 in appendix 1).

6.4.2 Sustainability and Certainty of Incentive Flow

The findings from most respondent regarding the sustainability of incentives revealed that they felt that REDD+ proposed financial promise was not going to be sustainable. The experts further expressed concern about the carbon markets on which REDD+ idea was premised. The respondents were not confident that the use of incentives would stand the test of time. A respondent from the academia said that because the source of finance was dependant on the donors' willingness and decision there was no guarantee of receiving the money.

> "If the whole idea of incentives is tied to carbon markets, what will happen to the communities if the price of carbon comes crashing down? How sustainable is this idea? You need to know that such programmes run well when finances from donors are flowing, but once they cease, then the project also dies" (See table 12 in appendix 1).

This view was also echoed by a REDD+ consultant in Zambia who said that there was nothing much new in the whole REDD+ programme compared to past interventions which also suffered the fate of financial uncertainties. His view was that REDD+ should focus on ensuring sustainable financial flow that invests in sustainable forms of livelihood and not dependent on carbon as the main source of finance.

> "The whole concept of REDD+ hinges around sustainable forest management, and ideally for every forester who is trained, they will see that there is nothing new apart from the incentives it presents which is actual sense they are just promises that never come down to the people. The big issue is about assuring revenue and sustainability. Therefore, REDD+ should not focus on making carbon as the main driver of REDD+ but also invest in other forms of livelihood" (See table 12 in appendix 1).

Another respondent from the CSO thought that dependence on donors to supply funding for REDD+ programme made the conditional incentive approach vulnerable to changes and unreliable. The respondent's view was that the life of the incentive was controlled by the one providing it who could decide at any time to stop financing and that would mean the end of the programme. This is expressed in the statement below:

> "Success of REDD+ would be felt only if the presence of the person providing the incentives is felt but the moment they leave then I am sure people will go back to their old ways" (See table 12 in appendix 1).

A respondent from the GRZ forestry department welcomed the idea of REDD+ but expressed concern on the lack of clarity on its idea of using incentives and whether the finances will be able to go down to the intended people.

> REDD+ is welcome, but it is not clear whether it will be sustainable or whether the incentives will trickle down to the forest user periodically, is still a big challenge. I personally don't see that happening (See table 12 in appendixes 1).

This sentiment was also echoed by another GRZ representative who said that although REDD+ had introduced an idea of putting value in a standing tree, the mechanism biggest challenge was to actualize this idea of incentives and ensure that intended people benefit from it. This is what the respondent said:

> "REDD+ is only different from old forest practices in that it wants to put or it puts a value to a standing tree which will be beneficial to those protecting the tree. But the biggest problem is to actualize this idea of incentives and ensuring that the intended people benefit from it" (See table 12 in appendix 1).

6.4.3 Effect of Incentives on livelihood and Job Creation

One of the aspects identified as underlying driver of deforestation and forest degradation in most topical developing countries is lack jobs. This has resulted in many families turning to the forests as a source of livelihood. Charcoal production and agriculture therefore take a significant source of livelihood for most of these families. Therefore, REDD+ through its incentive approach should be able to address these challenges for it to succeed in reducing deforestation and forest degradation. The findings from some of the respondents indicate that the felt the incentives would help in job local youths and consequently help reduce deforestation. For example, an expert from the forest department felt that with good management the incentive approach would stop people from cutting down trees by offering them alternative sources of livelihoods and job creation.

> "You see; local people are not going to manage the resources without the incentive. They would rather utilize the resource than die of hunger trying to conserve the resource" (See table 12 in appendix 1).

> "Policies in the past failed because they lacked any incentives for any common person to care about the forest. Yes, the incentive part is one that makes REDD+ significantly different from other past interventions. REDD+ is only different from old forest practices in that it wants to put or it puts a value to a standing tree, which will be beneficial to those protecting the tree" (See table 12 in appendix 1).

Offering forest communities' alternative sources of livelihood would make them stop cutting down trees and consequently reduce the problem of deforestation and forest degradation. Some respondents felt that using financial payments in form of incentive would motivate forest communities into conservation and forest protection and help them transition into other forms of livelihood. For example, one respondent working on REDD+ as a consultant said this:

> "I think the idea of incentives can help minimize deforestation to acceptable levels because many people depend on the trees for survival and if given a different source of income they may reduce on cutting down trees" (See table 12 in appendix 1).

Another REDD+ consultant was of the view that the sustainability of REDD+ finance was going to be tied to the contract entered between the financing agent and the community or the nation. The respondent was of the view that during the time that the contract is in effect the community will be receiving finances. This is what he said:

> "If the communities and the private companies will have a contract, the payments will be guaranteed for the period of the contract, and money will be flowing down to the community under set conditions. In this way, incentives could solve the problem temporally and probably exciting for the period the money is coming in" (See table 12 in appendix 1).

Some experts interviewed felt that investment rather than incentives would be a much better approach to address the issue of jobs and livelihoods. These respondents felt that creating jobs through investments would create salaried jobs with known payment dates as opposed to waiting on payments that are not certain on the amount or day they will come. They felt that this would more likely result reduction in deforestation and forest degradation. The results suggest that most experts preferred such investments as tree planting in which people draw a monthly salary would be a more sustainable approach than performance (conditional) based payments which no one knows the cycles of payments. A respondent from government forestry department said the following:

> "Reducing deforestation can only happen if the incentive was used to empower the communities with a sustainable project where people are employed and earn a monthly income through planting and protecting the forest" (See table 12 in appendix 1).

> "If REDD+ could go beyond the carbon incentives and be more of an investment approach that provides other opportunities to forest communities and ensure that they work and earn a monthly salary other than performance-based payments that vary in amounts, then deforestation can reduce" (See table 12 in appendix 1).

6.4.4 Incentives, Good Governance and Corruption

One of the most advocated for intervention for addressing deforestation and forest degradation through REDD+ is improving governance of the natural and addressing tissues of corruption in most of these developing countries. Some respondents felt that the incentive approach under REDD+ would help improve governance and reduce corruption because of the way it was designed. The respondent felt that what made REDD+ good were the conditions that participating countries were given for them to fulfill before they could participate and receive funding or trade in carbon. For example, one respondent said the following:

> "REDD+ wants to bring in a more systematized approach where the foresters are not the only ones driving the agenda but they are there to offer a service of conservation as well. Therefore, REDD+ is unique in that it brings in the 'incentive' idea and the concept of good forest governance" (See table 12 and 13 in appendix 1).

> "REDD+ is a good programme as it will provide an incentive to the community for protecting a forest" (See table 13 in appendix 1).

A REDD+ consultant in Zambia expressed the view that the success of REDD+ was more dependent on how it is managed locally. The respondent went on to say that the incentive could only work if the amount paid to the community people was more than what the individuals were earning from forest resources such as charcoal:

> "For the incentive to be effective it must be higher than the price of charcoal otherwise, the people will continue carting down trees" (See table 12 in Appendix 1).

6.5 Performance-Based Incentives at Work: Results from Pilot Projects

Most developing countries participating in REDD+ received financial grants to help them set-up governance and institutional systems as well as develop their national REDD+ strategies in line with the UNFCCC recommended strategies. Table 7 below shows examples and amounts of incentives that some African countries received from UN-REDD+ and other bilateral agencies for the preparation phase programme.

Table 7: Total UN-REDD Funded National REDD+ Preparation Programmes Since 2009

#	Country	Net Amount Disbursed ($ thousand)
1	Cote D'ivore	3,210
2	DRC	7,142
3	Nigeria	4,000
4	Republic of Congo	4,000
5	Tanzania	4,241
6	Uganda	1,799
7	Zambia	4,490
	Total	**2882**

(Source UN-REDD 2016:49)

Performance-based projects have also been running alongside the strategy preparation processes in developing countries. The main motive has been to generate lessons as well as addressing the problem of deforestation and forest degradation.

Table 8 below lists excerpts from selected REDD+ pilot projects that show how the incentives are planned and were working on the ground: The pilot projects were selected using systematic literature search (See table 9 in Chapter 7 for the step by step approach that was used).

Table 8: Incentives in Practice some examples from Selected Projects

PROJECT DESCRIPTION
1. Burkina Faso: Gazetted Forests Participatory Management Project aims to address D&D by increasing income for communities. Project to focus on improving forest governance, enhance participation, reforestation, promote beekeeping, increase access to improved charcoal stoves and promotion of Agroforestry and Agro-silvo-patrol production. It is financed by CIF/FIP and Government of Burkina Faso at a cost of $12.67 million (AfDB 2013: 4-5)
2. Ethiopia: Oromia Forestry Landscape Programme wants to Address deforestation by Improving livelihood through reforestation, promoting the use of alternative energy sources to fuelwood. It is financed by the BioCarbon Finance/ World Bank at cost $18 million + $50 million Emissions Reductions Purchase Agreements (ERPA) to be paid over a period of 10 years on verified reductions (EFI, 2016)
3. Ethiopia: Bale Mountain Eco-region REDD+ Projects wants to promote Sustainable livelihood, sustainable energy, and Sustainable forest management. Includes promotion of improved charcoal stoves; extraction of non-timber forest

products such as beekeeping, community-based woodlots, agriculture intensification, and institutional strengthening as well as forest law enforcement. Project targets to benefit 24,000 households. It is financed by Royal Norwegian Embassy, Royal Netherlands Embassy & Irish Aid. The project Cost is set as $10 million (MEF, 2015: 35-36)
4. Congo DR: Mai Ndambo Project focuses on Addressing agriculture and Fuel wood driven deforestation through agroforestry and reforestation Project Financiers: Forest Investment Programme Project Cost: $37 million (FCPF, 2017)
5. Kenya: Agricultural Carbon Project is a world bank funded project that targets to support 54,000 households on a 60, 000hactare agriculture land. The project wants to promote sustainable land use management through the promotion of Agroforestry. The project cost $4.8 million to run for 20 years. The carbon credits accrued will be purchased by the Hyundai Cooperation (The REDD desk, 2017)
6. Mozambique: Sofala Agroforestry Project wants to reduce deforestation and forest degradation by increasing household income. Engage in reforestation, agroforestry, and beekeeping. The project promises to pay 2/3 of carbon credits sales back to the farmers translating into an estimated USD $116 Per household annually (Mutusa, 2014)
7. Zambia: Lower Zambia REDD+ Project Targets to benefit 8000 local community members living around the area. Its mission is to reduce poverty by providing alternative forms of livelihood such as improving agriculture value chain and seeking efficient options for charcoal production to enhance benefits for locals. It is financed by the USAID & BioCarbon Partners Limited. Estimated cost $10 million to run for 20 years (BioCarbon, 2013)

The structure of the incentives in the REDD+ project is drawn as a contract between the community and an international agency or private company from a developed country. As can be seen from the examples in table 11, the contracts stipulate the period, project cost, targeted land area to be covered, and in most cases targeted a number of people to benefit and how much will be paid. A good example is the Mai Ndombe Project in Congo DR which details some of the ways the performance-based incentive is envisioned to work. Below is a news extract which gives a detailed account of the nature and structure of incentives in REDD+. The extract is gotten from WWF website published on 12th June 2017 tilted, 'DRC: REDD+ Shows very Promising Results in Mai-Ndombe after the first year:

……Communities participating in the FIP project have already grown more than 100,000 acacia seedlings, and are generating income by planting them to restore degraded land. The program uses acacia because it grows quickly and can rapidly provide wood for fuel and building, with the goal of taking pressure off natural forests. To date, about 60 Payment for Environmental Services (PES) contracts, overseen by WWF as the implementation partner, have been signed with local development committees for these reforestation activities, and have been set up with an innovative payment system. Here's how the PES contracts work: The first step is that communities receive **10 cents** per acacia seedling they produce. Three months after communities have prepared the degraded land with support from the project and planted seedlings, they receive their first payment for the establishment of the plantation **(US$75 per ha)**; nine months after plantation, they receive a second payment **(US$50 per ha)** if the seedlings have been properly maintained; and 27 months after initial plantation and after the dry season, communities receive a third payment **(US$25 per ha)** if the area is thriving

……In the Plateau district alone, about 200 groups made up of local chiefs, women and other community members have been working on land-use planning. The results are management plans identifying which areas will be protected and which can be used for sustainable production. All of these planning activities respect the principles of free, prior and informed consent of local stakeholders. Moving forward, DRC's Emission Reductions Program in Mai Ndombe will have these results to build on, as the country prepares to negotiate its Emission Reductions Payment Agreement (ERPA) later this year. This contract about results-based payments for REDD+ activities from the FCPF Carbon Fund would be an important milestone in supporting the country's ambition for a transformational shift toward sustainable land use and forest protection. While the EPA negotiations are just about to begin, the impact we had always imagined making with REDD+ is starting to happen in the DRC (WWF 2017:1).

What is clear to note from the pilot projects analysed this far is that the incentives under REDD+ are designed and intended to be paid to local communities that have implemented demonstrable activates agreed in the contract with the funding agency. The cases have also shown that there was no intention for the REDD+ incentives to finance large-scale projects such as investments in alternative sources of energy such as solar, geothermal or hydro. It is rather focussed on improving livelihoods of forest communities by supporting activities such as agriculture (agroforestry, beekeeping, reforestation, and afforestation and enhancement of improved charcoal stoves.

The findings have also show that the REDD+ incentive suggested payment periods will be made at lengthy intervals. In the case of the Mai-Ndombe project, for example, three payments are

spaced at 3, 9 and 27 months' intervals. These payments are further dependant on performance and thus are not guaranteed to the community even if the set time frames are exhausted.

The other important observation to make about the REDD+ incentive is that amounts suggested seem to be little considering the period they are planned to be made and the number of people that it targets to benefit. The Sofala project in Mozambique, for example, promises to pay $116/household annually (Mutusa, 2014). The Mai-Ndombe in DRC promises to pay $75/ha in the first year but brings the payment down to $25 (depending on good performance) in the subsequent years (WWF 2017:1). In the case of the Sofala Project in Mozambique, a $116 annual payment would translate into $9.7/ month.

The question remains whether these amounts, as well as the intervals for payments proposed, would help achieve the objective of improving livelihoods and subsequently manage to move people away from their current livelihoods that depend on forests.

6.6 Discussion

The idea of using incentives to address deforestation and forest degradation presents yet again an opportunity for developing countries to attempt to resolve this ever growing challenge. The opportunity lies in its promise to increase value in standing trees and support other forms of livelihoods that are less destructive. However, this approach is not new in as far as forest management is concerned. As was found during this study, previous attempts in forest management that involve rewarding communities for the efforts to manage or conserve their forests have been made but with minimal positive impacts. The challenge has been on the flow of finances as well as the amounts promised compared to what actually gets to the people. The REDD+ project has not escaped this design challenge that makes developing countries dependant on decisions and wishes of developed countries as financiers of such programmes. Historical experiences as presented by most local experts interviewed in Zambia shows that the success or failure of such projects was never in the hands of implementing countries but rather in those producing the money. The argument is that if the financiers change their minds and decide to stop financing such projects then that would be the end of it.

The other challenge with REDD+ incentives as presented in most REDD+ projects and national strategies is that they are being designed to support solutions that do not adequately address the

real problems that were driving deforestation and forest degradation. The main focus of the incentive has been to improve livelihoods of forest communities that are close or live within the REDD+ project area while leaving out those that live in urban areas. This restriction of the incentives to forest communities (mostly rural and peri-urban areas) does not in many strategies extend to urban areas that in fact were behind the deforestation and forest degradation through their increasing demand for wood energy (charcoal).

The Zambian case as noted by Vinya et.al (2011) clearly shows that much deforestation and forest degradation in the country was taking place in urban areas or along the line of rail. With increasing demand for energy in these urban areas coupled with low connectivity to the electricity grid, and erratic supply of power to those connected, charcoal continues to be the immediate alternative. The immediate source then are the peri-urban areas (that often are not considered for REDD+ projects) to provide much needed wood fuel. But what is worrying is that the Zambian strategy while mentioning the need for alternative source of energy does not show how the carbon credit incentives would help to finance or address the challenge of energy in a manner that would significantly reduce demand in urban areas. The idea behind the REDD+ incentive was to make a standing tree more valuable than a failed one. The hope with this is that forest dependent communities will then protect trees and pursue other forms of livelihood supported by REDD+ incentives. However, the findings as presented above, clearly suggest that the incentives would not achieve this if they only target forest communities and does not address the lucrative charcoal business that was behind deforestation and forest degradation in urban areas. Currently, a felled tree provides immediate income and is a source of employment for many un-employed youths; it is the immediate alternative source of energy for many households and sells like black gold. Therefore, a felled tree in countries like Zambia is by far more valuable and will thus require a more holistic investment in energy and job creation to offset it.

7 CHAPTER SEVEN: NEO-GRAMSCIAN PERSPECTIVES AND REDD+ - POLITICAL AND ECONOMIC INTEREST

7.1 Introduction

This chapter addresses the question of political and economic interests that were influencing and shaping REDD+ strategies and policies. The chapter attempts to explain why amidst the many uncertainties about the REDD+ mechanism achieving its original objective, the mechanism was still receiving support both from developed and developing countries. The chapter goes deeper to look at reasons behind the design of the mechanism as well as interests and control of the policy. The chapter does this by drawing on Neo-Gramscian perspectives of hegemony. It draws on the concepts of the historical bloc, passive revolution and war of position to explain the underlying political economy questions that were driving REDD+.

The chapter will show that rich and powerful actors were controlling and supporting REDD+ mechanism because it was assumed to a cheaper mechanism for mitigating climate change than addressing transport and energy driven emissions in developed states. On the other hand, developing countries consented to REDD+ mainly for the financial promise in form of incentives and not on whether the mechanism was capable of significantly addressing the drivers of deforestation and forest degradation.

The chapter also shows that REDD+ was seen as politically correct and less controversial mechanism between the north and the south countries because it had well defined roles and a promise of financial benefit to implementing countries that had been calling for the developed countries to do more in addressing climate change.

7.2 Methodology

In order to address the question of politics and interest in REDD+, qualitative data collection methods proved useful. The study therefore employed systematic literature analysis and expert interviews (see chapter 4 for details).

To determine the gaps in scholarship and identify the appropriate field sites for data collection, a systematic literature review was conducted. Systematic literature reviews vary from traditional reviews and are relatively novel within the development and environment sector. According to

Shadish et al. (2005), large amounts of information, as commonly associated with a traditional review, can lead to bias and prejudiced selection of studies to support the author's own arguments. A well-defined methodological approach is laid down prior to the review, to produce a transparent and replicable process. Table 9 below shows the step-by-step approach used for this study:

Table 9: Steps taken for Systematic Literature Review

STEPS	ACTION	OUTPUT
Step 1:	**Generation of Research Questions from scripts of the expert interviews with interest to research questions:** i. Reading and Re-reading of scripts. **ii.** Developing of themes and questions	**The questions Included:** i. What are the main drivers of deforestation? ii. How different is REDD+ to previous mechanism? iii. How will incentives help address drivers of deforestation and forest degradation? iv. What are the possible challenges that REDD+ will face? v. Who are the actors in REDD+ and what role do they play? vi. Who controls REDD+? vii. What are the main interests behind REDD+? viii. REDD+ financing
Step 2:	**Searching on the internet:** i. by imputing questions in the following sites ii. Use of Key words **iii.** Re-ordering key words in search**:** **The sites used included:** i. Google ii. Google Scholar iii. Other sites as directed by google iv. Organisational Websites v. Science direct	**Different Articles Around the different themes**. i. PDF documents ii. Web articles iii. Journal Articles iv. Organisational Reports v. E-books vi. Online articles vii. Recommendation Articles
STEP 3	Content analysis of documents: i. Reading and Re-reading ii. Generations of statements and views that help answer the research questions iii. Triangulating with views from experts iv. Sorting of articles. Keeping useful ones and putting aside the not so useful ones.	Inferences and meaning units generated Write up of thesis and arguments done

For the expert interviews, the respondents were asked questions around their perception of the REDD+ mechanism in general and its prospects on achieving its intended objectives. Some questions required them to state their views in terms of who they thought was in control of the REDD+ mechanism and how much influence different actors had in shaping and driving the mechanism. Some of the questions included the following: Who has more power and influence in shaping REDD+ in Zambia? How have other institutions participated in REDD+ processes in Zambia? Who actually runs and owns REDD+ and why? How has this affected the localization and implementation of REDD+ in Zambia. These questions also guided in systematic literature analysis done on the internet. The collected data was analysed using content analysis. Neo-Gramsci theoretical lens was used to interpret the findings.

7.3 Results from Interviews

7.3.1 Ownership and Interest in REDD+

Most respondent interviewed from Zambia viewed REDD+ as a mechanism belonging to resource rich actors whose interest was being advanced through international agencies such as the UN-REDD+. These interests according to the respondents was responsible for the challenges in the national REDD+ process. International agencies wanted to shape the national strategy in a way that to a large extent reflected their interest. According to one interviewee from the government, this disorganization had contributed to the delay in the development of the national REDD+ strategy for Zambia:

> "REDD+ preparation process in Zambia has not been easy. The idea or terms like, 'UN delivering as one'. The actual work was delivered by 3 UN institutions working with the forest department. That is FAO, UNEP, and UNDP"

> "Each of these institutions of the UN had its own mandate and in trying to harmonize these differences was not easy. Also, different people and institutions had differences in perception of REDD+. For example, the UNDP would prepare REDD+ blueprint manuals which they would ask you to follow but when dealing with communities these manuals could not work. We had to adjust depending on what you found on the ground" (see table 12 in appendix 1)

Most respondents also felt that REDD+ was just like any other previous donor-financed programmes that were only interested in meeting rules and guidelines in form of outputs and never to produce sustainable outcomes for the local people. One respondent from the Civil Society Organisation (CSO) noted that most local people and communities had challenges understanding the REDD+ programme and had difficulties making it their own. Another interviewee from the forest department also felt that although it was not very clear what the future REDD+ programme will look like it was likely to end up the same as the other similar programmes.

> "Sadly, donors are the ones who drive initiatives like REDD+ and that's why there is no real ownership for such programmes. Sadly, again most African governments tend to always want to dance to the tune of whoever is offering the money" (see table 12 in appendix 1)

> "The understanding of REDD+ itself has been a challenge, it depends on who is talking about REDD+. So, you find that meaning has an impact. And because of the differences in interests that people have, you go into a conflict of how something should be done and by whom" (see table 12 in appendix 1)

A government representative from the forest department said that the government of Zambia tried to do things differently from the way international actors wanted them done to fit REDD+ into the local context. However, he notes that this attempt was had a negative impact on the REDD+ programme in Zambia as it contributed to delaying the strategy development process:

> "Although, serious efforts to direct how Zambia's institutional setting, as well as REDD+ strategy, should look like, including efforts to influence personnel to manage the process was made by various international institutions working on REDD+ in Zambia, we tried to be independent in our process. Zambia has tried to withstand the pressure from donors" (see table 12 in appendix 1)

> "In terms of delivery, a donor-funded project according to my experience is that we can see outputs but in terms of outcomes there is nothing really that remains to talk about. For example, we have seen building projects funded by donors and these projects have ended up as 'white horses' immediate donor finance stops coming. Donor projects often end with the end inflow of donor cash" (see table 11 in appendix 1)

Another respondent felt that the REDD+ programme was not about addressing deforestation in developing countries but merely a show of responsibility by developing nations who were the main contributors to climate change. For example:

> "I think donors are merely responding to their global responsibility to the pollution that they have been and continued emitting" (see table 12 in appendix 1).

7.3.2 National REDD+ Strategy Development Challenges

A government representative from the ZEMA expressed appreciation of the role international actors and donors were playing in promoting programmes like REDD+ and actively getting involved in seeing them get implemented. The respondent viewed REDD+ as a source of financial help to the government to implement national programmes and support. The respondent said that because of the rules in and conditions of donor finance, there was often a good level of accountability on part of the government. However, the respondent expressed concern that because the programmes like REDD+ were not developed from the local community level but were brought and imposed on the community, they were to be problematic when implementing:

> "Internationally supported programmes like REDD are okay in that it helps governments in the provision of resources and the issue of accountability are okay. But the problem is that most such projects are problematic to implement because the community often have challenges to understanding what the donor wants. It would be better if a country can develop the programme and then the donors come in to fund the project" (see table 12 in appendix 1)

In the same line, a respondent from the academia felt that the problems that programmes like REDD+ were likely to face were not only about international players but also a responsibility of the national actors. The respondent felt that national and local actors including government lacked seriousness and consistency in participating in programmes like REDD+. He said most works were left to donor representatives and international agencies representatives to shape the policy documents for them. This is what he said:

> "Donors do have or come with their own interest either from a global perspective or from their national perspective, especially in policy formulation. Donors can give you money maybe because of international conventions. For example, when you sit in policy validation

workshop, most of the times you will have let say 10 to 20% coming from donor community but when you circulate the document for comments you will get 90% comments from the donors and only 10% from locals. In such a situation, it's not a donor problem but a local problem. In fact, most local people don't even want to attend such meetings (see table 12 in appendix 1).

It was found that some experts felt that disorganization among local actors was delaying the strategy development process and affecting the nature and focus of the strategies contained in the document. One respondent said that local actors failed to take advantage of the support given by international actors to make a real impact on the ground because of disagreements.

> "Zambian case had a lot of quarreling among sectors in Zambia. This has made the whole process of developing the strategy take too long. When you have an international convention, it's up-to-the country to domesticate the convention or not" The donors have been given our country so much money to implement some of these programs but have we really made an impact? (See table 12 in appendix 1)

7.3.3 Negative Historical Experience on Donor Funded Programmes

How different is REDD+ to previous interventions that were designed to address deforestation and forest degradation? Can REDD+ be the solution? The findings indicate that most respondents apprehensive about the idea of using incentives because of the historical experience they had with similar projects that failed to deliver because of over-dependence on donor financing (see appendix 1). They felt that there was nothing novel in the REDD+ incentive mechanism for it to achieve its central objective. The experts referred to programmes such as the Joint Forestry Programme that failed to archive its objectives the moment donor financing stopped coming in. The experts said that past similar projects failed to benefit the communities and consequently failed to continue in the absence of donors. A representative statement is gotten from a government respondent working under the forest department who said the following:

> "REDD+ or nor REDD+ such kind of programmes have been there in the past. For example, the forest policy in Zambia had provisions, which talked about providing payments to the community to help them venture into other forms of livelihood, but it was never implemented and people never benefited." (See table 11 in appendix 1)

7.3.4 Actors Influence in the REDD+ Process

Experts in Zambia who had participated in the REDD+ process were asked to give their views on the experience with the process of developing the National REDD+ strategy in Zambia and the agency of different actors in that regard.

The Zambian case, as seen from the results presented in chapters 5 to 6 shows that the global guidelines and rules for REDD+ recommended by the UNFCCC were closely followed in the design of institutions as well as the focus of the national REDD+ strategy. The clear indication is in the establishment of an independent climate change secretariat and the REDD+ coordination unit, which were a clear reflection of REDD+ global standards to transform the forest institutions for natural resource governance in participating developing countries.

The views from respondents indicate that material superiority was the main determining factor in generating of ideas, participating in REDD+ activities as well as controlling the pace and direction of the process. Most respondents felt that material rich states were in control of REDD+ both at the global as well as national implementation level (see appendix 1). As earlier mentioned above, the non-state actors, multilateral institutions and bilateral agencies actively participating in the national REDD+ process extended the presence and control of the REDD+ programme in developing countries by using resource superiority provided by developed states. In Zambia for example, the UN-REDD+ agencies that included FAO, UNEP, and UNDP, were actively engaged in the local process operating as financiers and experts guiding the national REDD+ strategy process (UN-REDD, 2009b; Vinya *et al.*, 2011; Redd, 2013). They led in the design of terms of reference for consultants, in appraising reports as well as approving programme finance.

The views from local organizations and experts participating in the national REDD+ process reveal the strong agency of the international institutions in the national REDD+ process in determining the institutional design, the focus, and nature of the strategies, for example:

> "UN-REDD+ representatives will tell you that for this to be supported you must take this direction. Because they have an interest in that direction either just a study or just create jobs because this is not just a problem here but even funders want to create jobs for their people. So they would rather do something that brings at least 5 or 6 people to come and work even though those people don't bring any value" And if you don't follow their

> conditions you risk not receiving any more funding thus delaying the project or losing out completely" (see appendix 1)

It is further clear that these agencies have a role of ensuring that developing countries undertake their REDD+ activities in conformity to the global standards and rules consented through the UNFCCC cop meetings. As financiers and generators of knowledge, these actors are able to drive national REDD+ research as well as appraise progress report for further financing. They are active agents in the design of national REDD+ ideas and programmes as well as participating in them. The case of Zambia has revealed that failure to follow the guidelines as presented in international standards and rules on implementing REDD+ meant a delay in receiving financial approval from the UN-REDD+ agencies and consequently delay in the whole REDD+ process.

> "UN-REDD+ representatives will tell you that for this to be supported you must take this direction. If you don't follow their conditions, you risk not receiving any more funding and thus delaying the programme or losing out completely" (see appendix 1)

The forest department in Zambia, however, was also found to have strong agency besides the fact that it did not have the financial and technological power to shape and dictate the direction of the REDD+ process. This finding shows that other aspects besides financial superiority are at play in actor agency in the REDD+ process. The forest department case thus reveals three important factors. Firstly, it shows that actor positioning as the nation's custodian of the forest policy and its selection as a lead department for REDD+ activities through the REDD+ coordinating unit gave it the privilege of actively participating in planning as well as the execution of the planned activities. Secondly, the fact that most of the participants in the REDD+ training programmes as well as consultation meetings came from the forest department making it more influential in shaping the REDD+ strategy and focus. Thirdly, the forest policy and programmes like ILUA 1 and 2 that are under control and management of the forest department have been identified as good entry points for REDD+ thus giving the department more influence on the REDD+ programme as a whole.

It is further clear that the strong agency of the forest department in REDD+ had a little positive effect on the focus of the REDD+ national strategies as well as the inclusion of key players in the stagey development process. The departments' role was mainly to facilitate the localization process as a goal-between international actor, national political leadership and local communities.

The department through the newly established REDD+ coordinating unit followed a strict methodological approach developed and agreed at the UNFCCC conference of parties with little room for alterations. UN-REDD+ agencies were on hand to ensure adherence to these rules.

> "REDD+ preparation process in Zambia has not been easy. The idea or terms like, 'UN delivering as one'. The actual work was delivered by 3 UN institutions working with the forest department. That is FAO, UNEP and UNDP" "Each of these institutions of the UN had its own mandate and in trying to harmonize these differences was not easy. Also, different people and institutions had differences in perception of REDD+. For example, the UNDP would prepare REDD+ blueprint manuals which they would ask you to follow but when dealing with communities these manuals could not work. We had to adjust depending on what you found on the ground" (see appendix 1)

Actors that depended on external financing for generation of information and participation in the REDD+ programmes like, academia, CSO, and consultants had only moderate influence in local REDD+ strategy development process. Strong actors like the UN-REDD+ and the REDD+ coordinating unit, developed the terms of reference and time frames for research and consultancy used to inform the national REDD+ strategy. The terms of reference clearly followed the intentionally set methodological guidelines and language (UN-REDD, 2009b; Vinya *et al.*, 2011; Redd, 2013). This means that the outcomes of these consultancies and research are greatly determined by those providing the finances. The statement in the consultancy report conducted to investigate the drivers of deforestation and forest degradation to inform REDD+ strategies for Zambia confirm this conclusion:

> "Although the original objective of this work was to carry out a nationwide survey, the time and resources available did not permit such a wide-ranging study to be undertaken. For this reason, the results of the present study must be interpreted with some caution" (see Vinya et al.2011: 42)

Although the role of these local and independent actors in generating knowledge needed to shape the REDD+ strategies is important, the Zambian REDD+ process presented them with very little room to generate radical and representative ideas that would effectively address the problem of deforestation and forest degradation. It is further clear that the global REDD+ mechanism was

working on strict project time and financial budget that was more interested in meeting globally determined outputs and paid little attention to real challenges behind deforestation and forest degradation such as energy deficits. It was not interested in the effectiveness and sustainability of the programme in addressing real drivers of deforestation and forest degradation.

The weak agency from the forest communities and other government departments were mainly because of their lack of active involvement in the process. These actors only participated in REDD+ activities upon invitation by the REDD+ coordinating unit. Local communities did not understand REDD+ and what it was all about and thus took a passive role in the REDD+ process. Their invitation was more as a response to international requirements to include indigenous people in the process and not as knowledge providers contributing to the shaping of the strategy.

> "We only went there to hear what they had for us but most of it was not even clear. They have never come back or invited us again to tell us what had happened to the project, or where it is now. Imagine for our chiefs and those community representatives, most of them are just invited to fulfill the rules on participation otherwise everything is decided for them" (see appendix 1)

However, participation in workshops and training alone did not influence the structure of the REDD+ strategy that the nation developed. Other government departments like the energy sector, although they participated in some of the workshops on designing REDD+ strategy, their role was largely determined by those responsible for drawing up the programme of activities and had the power to determine and invite who attends the REDD+ workshops. They did not generate information or finance activities to inform the design of the national REDD+ strategy. One expert interviewed from the energy sector said:

> "Zambia Electricity Supply Company (ZESCO) has not worked or is not engaged with the forest department in any activity in addressing deforestation and the Secretariat working on REDD+ has not engaged us as an institution in the preparation process" (see appendix 1)

The findings in Zambia have shown that there were important factors in the REDD+ architecture that affected actor-agency in the national REDD+ process. Firstly, the presence of international actors in national processes greatly influenced and ensured developing country adherence to these

international standards even when the local actors did not believe in them. These actors were operating to promote and ensure that the UNFCCC recommended rules and guidelines were followed in the development of the REDD+ national strategies. Failure to follow the guidelines meant a delay in financing and consequently missing out on quick start funding from donors.

> "If you don't follow their conditions you risk not receiving any more funding and thus delaying the programme or losing out completely" (see appendix 1)

Secondly, the finances, whether actual or promised, were one of the greatest factors in determining agency of the actor. For example, actors with finances did not need to provide research reports themselves but only develop terms of reference and provide the finances to researchers generate information and ideas that were used to inform the process. Thirdly, it is also clear that participation in the process alone was not adequate to give an actor a strong agency. There is a reason to believe that some actors were invited just to fulfill the UNFCCC methodological requirements and could not have a significant role in the design of REDD+ strategy.

Based on the findings in this studying terms of the challenges in governance there is a reason to believe that although Zambia was actively engaged in the REDD+ process and gone on to prepare its national REDD+ strategy the programme would not capable of significantly addressing real drivers of deforestation and forest degradation. This conclusion is backed by views from experts interviewed who felt that REDD+ reflected similar tenants as other past efforts supported by donors that failed to deliver significant change. These programmes failed due to poor governance, lack of inclusiveness, over-dependence on donor finances, lack of a proper benefit sharing mechanism, as well as policy overlaps, all of which REDD+ in Zambia had not adequately addressed.

The results in this study have shown that the REDD+ programme in Zambia was facing an ownership challenge. Many local experts interviewed from various sectors viewed REDD+ as a program for the forest department alone which tended to centralize natural resource management, something they had been trying to change for a long time. The low level of participation from the local communities and other government institutions from the energy sector in the designing process of the national REDD+ strategy in Zambia, further justify the problematic of ownership and need to actively pursue other avenues that encourage wider and active participation of

stakeholders in the programme. One respondent from the forest department confirms this challenge in the following statement:

> "If we had our money we would have made the fight against deforestation with more participatory processes and inclusion of other stakeholders" (see appendix 1).

7.4 Neo-Gramsci and REDD+ Mechanism?

This section addresses the perceptions expressed by local experts on interest and control of the mechanism and uses neo-Gramsci lens and views from other writers to explain the interests that were driving REDD+. In doing this the section looks at different actors in REDD+ and evaluates their role and agency in international processes like REDD+.

7.4.1 Material Superiority of Developed Countries in REDD+

The governance of REDD+ does not escape the problems associated with global climate change governance, such as lack of equal representation in global negotiations, imbalance research contribution to climate change science between the developed and the developing countries and challenges in linking global policies to local and contextual situations (Visseren-Hamakers and Vijge, 2012; Korhonen-Kurki *et al.*, 2014; Heinrich *et al.*, 2015). As a multilayer and multi-actor mechanism, REDD+ has evolved as a programme in which different groups are created to reflect roles for the developed and roles for the developing countries (Flaming and Stanley, 2010; Corbera and Schroeder, 2011a; Cronkleton, Bray and Medina, 2011).

It is clear from the findings presented in chapter 6 and 7 of this thesis that REDD+ architecture and process takes on a problematic top-down governance structure that is designed and played under rules and guidelines that are mostly influenced by the rich states (Atela *et al.*, 2016), and consented by all actors in a process facilitated by the non-state actors such as UN-REDD+ and FCPF of the World Bank (UN-REDD 2010).

Based on the findings of this study, there is a reason to suggest that the REDD+ architecture offers little room for developing countries to suggest and implement radicle strategies that would effectively end deforestation and forest degradation in their countries. Developing countries depend on the finances, research and technology and standards set at the global level and highly influenced by those with resource superiority. This agrees with Atala et al. (2016) who also found

that the agency of poor African countries in REDD+ negations was weak because of low representation and lack of resources and technology to generate ideas and participate in their implementation.

It is further evident from the findings of this study that although the text in the UNFCCC guidelines on REDD+ emphasize consideration of factors like participation and generation of country-specific REDD+ strategies, the architecture of REDD+ still favored actors who had the financial, technology and ability to generate and implement ideas over those that merely participated in the process (Atela et al. 2016). This is evident in the Zambian case where international actors such UN-REDD, World Bank, and other bilateral agencies had stronger agency in the generation of ideas, participation in national workshops on REDD+ as well as an appraisal of reports and project documents.

7.4.2 Non-state actors in REDD+: The Extended Arm of Elite States

The control of REDD+ by developed countries is further extended through non-state actors such as the IPCC and other multilateral and bilateral institutions who depend on finances and technologies provided by these resource-rich states. Their role in national REDD+ programmes as seen in the Zambian case involves generating of information, financing of trial REDD+ projects as well as participating and contributing to local REDD+ process and strategies. These agencies exercise greater influence in shaping the methodological guidelines, design, and nature of rules for accessing finances as well as selecting which country gets supported and financed under the global REDD+ support programmes (Atela *et al.,* 2016). The interests of these organizations are significantly shaped by governments of developed nations who are providing finances through them.

It is evident from the findings in this study that these non-state actors and bilateral agencies are working as channels through which ideas to legitimize control of REDD+ and climate change mitigation discourse by developed countries was actualized.

The REDD+ governance architecture thus replicates a system that has a hegemonic group that uses its material power to protect and advance its economic and political interests. The hegemonic group is using the non-state actors and bilateral agencies as an extension of its control of the REDD+ in developing nation. There is further reason to believe that these non-state actors are

working to legitimize and perpetuate the ideas of developed nations on how developing countries should manage the natural resources within their countries.

7.4.3 The Developing Countries in REDD+: The led

Under the REDD+ rules and guidelines, developing countries are considered as the implementers of the programme. To be part of the implementation process a developing country must apply and be accepted as a REDD+ implementing country (UN-REDD 2010). The countries are not forced into signing up for the REDD+ but make voluntary application to join the programme.

It is however clear from the findings presented in Chapter 5 and 6 that developing countries were interested in REDD+ because of financial promise in form of incentives and preparation grants from developed countries. The findings of this study clearly suggest that developing countries like Zambia saw REDD+ as another internationally designed set of rules and guidelines for accessing international financial support and less as a radicle policy direction that would stop or reverse deforestation and forest degradation and support sustainable development in their countries.

It is evident from the findings of this study that developing countries are the led while developed countries are the leaders of the REDD+ programme in the generation of ideas, rules, standards, financing of programmes as well as appraising performance.

The results further suggest that developed countries were interested in supporting REDD+ because it was a cheaper mitigation programme and not necessarily because it was a radical strategy that would reduce deforestation and forest degradation. The main reason was to serve costs (financial and job losses) while at the same time be seen to be doing something about climate change. This is evident in the continued interest to finance REDD+ mechanism despite clear evidence of the many challenges that the REDD+ mechanism is likely to face.

The national REDD+ strategies developed in most African countries including Zambia have shown that for these countries, the REDD+ process was more about meeting the UNFCCC stipulated methodological guidelines for accessing financial support and less about a radical solution to the countries challenges with deforestation and forest degradation. It is also clear that REDD+ rules and guidelines restrict the activities and programmes that it can support or finance and further making it difficult for countries like Zambia to develop strategies that would drastically address social economic and political issues behind forest cover loss. A clear example is noted in the Zambia National REDD+ strategy that identified and included investments in alternative

renewable energy such as solar, geothermal and hydro as interventions to address the wood energy driven deforestation and forest degradation. While this inclusion is commended, the reality is that it is not supported by the global REDD+ incentive structure which focuses on working with local communities and changing livelihoods at the community level and not large national investments.

7.4.4 The Historical Bloc and REDD+: Real Interests Behind REDD+?

Although the discussion to include forests in climate change mitigation strategies go back several decades, the actual idea of formulating an incentive-based REDD+ mechanism to replace the Kyoto-protocol started in 2007. The rich developed countries designed and promoted the REDD+ idea as a cost-effective measure to reduce global greenhouse gases (Stern, 2007; Holloway and Giandomenico, 2009). The Kyoto-protocol had excluded developing countries because their contribution to the global greenhouse gases was insignificant(Stern, 2007; Holloway and Giandomenico, 2009). The Kyoto agreement focussed on addressing emissions from energy and transport and called for developed countries to determine the level of emissions they were going to reduce voluntarily (Rowlands H., 2001; Peake, 2004; Ghezloun, Chergui and Oucher, 2012). Addressing energy and transport led emissions has however proved economically expensive and is seen as politically and ethically difficult to implement (Thompson, Baruah and Carr, 2011c; Ibikunle and Okereke, 2013; Uneca, 2014). Many people in the energy sector lost jobs and many more were threatened by the imminent shift to other cleaner forms of energy (Kern and Alber, 2008; Pearce and Stilwell, 2008; Räthzel and Uzzell, 2011)

Therefore, this seemingly cheap and politically acceptable REDD+ mechanism has attracted attention from the historical Kyoto-protocol bloc who suddenly have found a way out of an expensive and problematic Kyoto deal. Even before the REDD+ was adequately debated and agreed, new international institutions and financing from developed countries to help developing countries prepare and pilot REDD+ mechanism had started flowing. New synergies between and among actors have been created to foster REDD+ ideas and ensure compliance to standards and rules developed and implemented through the UNFCCC (Parker *et al.*, 2009; FCPF, 2013). For example, the United Kingdom, Norway, and Germany agreed to work as one in financing REDD+ programmes (GNU 2016; Germany, Norway, and the United Kingdom 2014).

One of the institutions that have emerged is UN-REDD+. It comprises the FAO, UNEP, and UNDP with the primary function of providing finances and technical guidance to the developing countries participating in REDD+ (UN-REDD, 2009a; Kronenberg, Orligóra-Sankowska and Czembrowski, 2015). The mechanism through the work of organic intellectuals in form of consultants, CSOs, private investors and academia who are funded by rich states have managed to gain global consent as a new strategy for climate change mitigation.

The strong agency of the hegemonic Kyoto-protocol bloc has seen REDD+ endorsed as one of the main mitigation strategies post-Kyoto-protocol climate change deal that was agreed in Paris 2015 (UNFCCC, 2015c; Pasgaard *et al.*, 2016). Using the quick start programme and its financial and technological superiority, the Kyoto-protocol bloc has continued to influence the focus and design of national REDD+ strategies using consent and promise of rewards for countries that meet the standards set at the international arena (Germany, Norway, and United Kingdom 2014; Rakatama et al. 2016). This influence has seen REDD+ strategies focusing on agriculture led deforestation and pushing for forest governance reforms in line with the interests of the financiers of the mechanism.

The architecture of REDD+ has thus seen the hegemonic Kyoto-protocol group re-created in a web of new institutional arrangements and ideas using international non-state actors like the UN agencies, multilateral institutions, and private companies to exercises leadership and control of REDD+ mechanism through consent. Their interest is to pursue cheaper and politically less controversial climate change mitigation strategies. Without using force, this group has managed to secure consent from developing countries for a REDD+ mitigation climate deal and are now seeking ways to finance and implement the programme.

7.4.5 REDD+ Rules role of Non-State Actors in Securing Consent: Passive Revolution

For a country to participate in REDD+, it has to apply and be approved by an international body (Parker *et al.*, 2009; Lyster, 2011b; Reinecke, Pistorius and Pregernig, 2014). Once approved the country must follow the UNFCCC three-phased methodological approach with financial and technological support provided by developed countries through multilateral or bilateral agencies. The developing country must also be party to the UNFCCC climate change agreements that provide other guidelines on how REDD+ should be implemented (Ogonowski, 2012; Redd, 2014).

The focus of REDD+ is to address drivers of deforestation by supporting and pushing for legal, institutional and policy reforms in the governance of forests in developing countries (Parker *et al.*, 2009; Ogonowski, 2012; Redd, 2014). In the Zambian case, for example, REDD+ facilitated the formation of the climate change secretariat and the REDD+ coordinating unit to oversee all REDD+ activities in the country. The new REDD+ strategy was developed as a response to the ideas and guidelines put in place by the international community through the UNFCCC. At the local level, the REDD+ mechanism proposes changes in people's livelihood away from forests by providing them with financial incentives for protecting forests

However, it is clear from this study that the process of establishing new institutions and developing the REDD+ strategy has been under the control and direction of the donors through UN-REDD+ agencies and bilateral institutions. As financiers and guiding experts, these agencies have proved to have more control than the government actors who according to the finding of this study were more as legitimizing agents for the already prescribed incentive-based program.

The findings in this study also suggest that REDD+ wants to keep developing countries at the same level of development without pushing for serious development options for developing countries. Its deliberate focus on trees and not energy; incentives and not a real investment in the case of Zambia are a clear indication that REDD+ is a passive strategy that is not only cheaper for the annex1 countries but also settles the protracted finger-pointing debates between the north and south countries over who is more responsible for climate change. The catchphrase in REDD+ has been 'incentives' which is a promised reward for adhering to internationally set standards and demonstrating good forest governance.

7.4.6 Material Power and REDD+: War of Position

Deforestation and forest degradation contribute about 20 per cent of global greenhouse gas emissions (Parker *et al.*, 2009; Thompson, Baruah and Carr, 2011a) every year. This problem is rampant in tropical developing countries. Thus while the Kyoto-protocol mitigation efforts excluded developing countries, REDD+ has brought these countries right at the center of climate change mitigation. The target for REDD+ is forests. For REDD+ therefore, protecting and conserving forests is presented as a substitute strategy for reducing greenhouse gas emissions to the past and expensive energy and transport mitigation strategies.

The traction for REDD+ for developed countries is in the idea that it does not talk 'fossil energy' but promises to yield similar results at lower cost. REDD+ has shifted the climate change negotiations from energy to trees implicating developing countries as part of the causes of global warming.

However, the international actors including developed countries have developed ideas, guidelines, rules, and using financial superiority, have managed to coerce developing countries into signing the climate change agreement that includes REDD+. The focus of global REDD+ is in addressing agriculture led deforestation and reward good forest governance and conservation effort through strict monitoring, reporting, and verification process (UNFCCC, 2014). Standards are therefore important in determining the flow of finances. For developing countries to access finance, they are expected to meet the set standard (Cadman *et al.*, 2016; Sheng *et al.*, 2016).

In terms of how REDD+ will work, there has been continued debate as to whether the mechanism should include carbon offsets like was the case with CDMs (Griffiths, 2008; Thompson, Baruah and Carr, 2011a; Heinrich *et al.*, 2015; USAID, 2015). Developing countries have countered this idea on the basis that it was promoting double carbon accounting and consequently give developed countries a license to continue increasing their fossil fuel uptake and emissions from the energy sector. This resistance mainly came from Brazil's submission in which they demanded that industrialized countries should continue addressing the emissions from energy and transport and not use REDD+ as a justifying reason for the continued increase in fossil fuel uptake (Boucher, 2015).

While discussions on REDD+ finance were still going on participating countries have gone on to develop national REDD+ strategies as part of the internationally recommended preparation process (Minang et al. 2014). The Zambian strategy has thus gone on to develop a nested landscape strategy that brings REDD+ under the broader national development vision managed centrally (Attafuah, Kasaro and Fox, 2014; FIP and UN-REDD, 2016). This strategy focuses on poverty alleviation by enhancing and supporting livelihoods prevailing in specific communities, contrary to the global REDD+ idea of targeting forest governance and payments for conservation efforts (Attafuah, Kasaro and Fox, 2014; FIP and UN-REDD, 2016).

However, the findings of this study suggest that developing countries like Zambia had accepted the REDD+ mechanism for its financial promise and not that it was capable of achieving its central objective. The strict conditions and rules set at the international climate change arena further restricted developing countries from pursuing initiative or strategies that they felt were better in their own country context. This is confirmed in the statement from a representative of the forest department in Zambia:

> "If you don't follow their conditions you risk not receiving any more funding. But If we had our money we would have made the fight against deforestation more participatory processes and including other stakeholders" (see appendix 1)

Developed countries had gained control of REDD+ again by using strategies like the quick start financial programme. This strategy was putting developing countries in hasty in trying to meet the standards and access funds at the expense of developing realistic and effective strategies. The Zambian experts working on REDD+ claimed that because of the delay in developing its REDD+ strategy Zambia was denied further funding to perfect its strategy and begin implementing it. The experts felt that donor-funded programmes mostly served the interest of financiers and not that of the country they were trying to help.

> "UN-REDD+ representatives will tell you that for this to be supported you must take this direction. Because they have an interest in that direction either just a study or just create jobs because this is not just a problem here but even funders want to create jobs for their people. So, they would rather do something that brings at least 5 or 6 people to come and work even though those people don't bring any value" And if you don't follow their conditions you risk not receiving any more funding" (see appendix 1)

> "Donors in many cases push their own agenda rather than that of the country they were helping. Most of such programs are developed already at a higher level (see appendix 1)

The findings in Zambia are a clear indication that financial and technological superiority gave elite states a strong influence in REDD+. The findings also prove that despite the fact that many did not believe in REDD+ delivering its central objective, they had little options to counter its proposed strategies because doing so would result in losing out on international financial and technological support.

7.5 Discussion

This study argues that the REDD+ mechanism does not escape the world system in which material power was dictating policy design and focus. By looking at REDD+ mechanism, in terms of its finance as well as strategies, this study has revealed that reward and coercive power through the use of financial and material advantage was being used in developing REDD+ methodological guidelines and the narrative that was eventually shaping how nations received and localized REDD+. The idea of mitigating through addressing deforestation being cheaper was based on claims that reducing Greenhouse gases through addressing drivers of deforestation and forest degradation in tropical developing countries was the most cost-effective option for developed countries. Thus, the use of 'incentives' as a reward for developing countries that would do things by the book received political acceptance by both developed and developing countries. There is strong reason to believe that for developing countries, the REDD+ mechanism was more about access to international finance than it was about addressing deforestation and forest degradation and mitigating climate change.

This study has found that, firstly, the REDD+ programme despite its many uncertainties was still moving forward with financial backing from developed countries through bilateral and multilateral finance. Secondly, the scientific position that forests were the second most source of global greenhouse gases and REDD+ being the cheapest policy intervention to address this problem, has managed to silence the voices of developing countries who for a long time pointed a finger on developed countries for not doing enough despite being the major causer of climate change. Thirdly, REDD+ has significantly quenched the political and economic arguments that have characterized past climate change negotiations between the north and the southern states. These developments, therefore, re-enforce the claim about rich states using financial power to drive their individual national interest in the climate change negotiations and policy design. It also shows that the promise of financial reward embedded in REDD+ had not only convinced developing countries into consenting to the mechanism but was also being used by elite States as a controlling and legitimizing tool for REDD+ policies within developing countries.

8 CHAPTER EIGHT: CONCLUSION

8.1 Introduction

This chapter is the general conclusion of the thesis. It revisits the question that the study was asking: To what extent can the incentive-based REDD+ strategy deliver on its central objective of reducing greenhouse gas emissions from deforestation and forest degradation, promote conservation and forest protection as well as support sustainable development in implementing developing countries like Zambia?

The chapter revisits the inferences made in the preceding chapter and shows why the current incentive based REDD+ will have little impact on halting or reversing deforestation and forest degradation in countries like Zambia. The chapter further presents the contribution of the study makes to the body of knowledge on REDD+ as well as to policy and theory in global environmental governance.

8.2 Defining Drivers of Deforestation and Forest Degradation: Implications for REDD+

The REDD+ participating countries have not clearly defined and ranked the real problems driving deforestation and forest degradation, which, according to the IPCC and UNFCCC is the main problem the strategies should be solving (UNFCCC, 2008, 2013; Delacote, Robinson and Roussel, 2016). What is evident in the case of Zambia, for example, is the problem of how energy driven deforestation is classified, named and rated. This study found that energy was presented in a disintegrated form as charcoal production, use of wood fuel, use of wood for drying tobacco, and use of timber in industrial kilns. These different ways of use of wood 'energy' are further placed under drivers of forest degradation and not drivers of deforestation hence undermining their level of importance in the REDD+ policy interest and focus. These definitions and classifications of drivers have clearly resulted in under-rating of the contribution that demand for wood energy makes to deforestation and overall greenhouse gas emissions in as far as REDD+ is concerned. As a result, the nature of interventions developed to address this problem in REDD+ also reflects the positionality that all these energy-related drivers are given in the international and local narrative of the REDD+ programme. And in responding to these definitions, this study found that most participating countries only suggested strategies such as the use of charcoal efficient stoves, planting of woodlots for firewood and agroforestry as direct measures to address energy driven

deforestation and forest degradation. These interventions have been tried in the past and have not significantly addressed the energy problem, especially in urban areas, were energy driven deforestation and forest degradation was rampant. A clear example is a failure in the adoption and sustained use of these efficient bioenergy stoves in most developing countries as recorded by Dendup and Arimura, (2019) and Karanja and Gasparatos, (2019).

This study argues therefore that unless the drivers are well understood and defined, and new strategies are developed to adequately address them, REDD+ is also likely to go down like the other past interventions that have been tried and failed (Jessica. L, Chandra. Lal and Zachary. A, 2016).

8.3 Can Incentives Address the Drivers of Deforestation and Forest Degradation, Especially Energy Driven?

Assuming the problem of drivers of deforestation was well defined, the question that would remain is can those drivers be addressed by using financial incentives as described under the REDD+ mechanism?

This study has shown how the REDD+ incentive structure seeks to motivate tropical developing countries to slow or stop deforestation and forest degradation by altering livelihoods of forest communities to more forestry friendly ventures (Olander et al. 2011; Kanowski et al. 2011b; Ministry of Environment Sweden 2014; Mining, Van Noordwijk, L. a Duguma, et al. 2014). This concept is prescribed to operate under conditions and standards developed at the international level.

Case examples presented in chapter 5 and 6, as well as the way international actors have presented the conditional incentives, give an idea of what is expected from the incentive. Firstly, the providers of finances will either be governments of developed states private companies and or multilateral institutions. Secondly, the payments are conditional (performance based) in which case a country or community will only receive payments upon meeting those conditions as assessed by international experts. Thirdly, the incentive will be paid at lengthy intervals in months and years upon determined by the contract. Fourth, the incentive focuses on improving forest

governance and supporting livelihoods of forest people and does not include large-scale investment such as renewable energy.

The findings of this study, however, show that the incentive approach as designed by REDD+ actors will fail to deliver on its objective for three reasons as follows:

Nature and Focus of Incentives

It is clear that the REDD+ incentives are more targeted on addressing agriculture related drivers and deforestation and pays little attention to energy which is a critical driver of both deforestation and forest degradation in most African countries like Zambia. For example, investment in clean energy such as solar, geothermal or hydro which would result in a reduction in energy led deforestation are not supported by the international REDD+ concept mostly on technical and cost reasons. It is fair to suggest therefore that without addressing energy-led deforestation and forest degradation in Zambia, is in itself failure to halt or reduce deforestation and forest degradation in the country.

The other challenge that the incentive approach is likely to face in a country like Zambia is to outdo the huge and existing agriculture incentive that the government provides the farmers for purposes of increasing their crop yield and food security. The government of Zambia also has a deliberate policy to diversify the economy from dependant on mining to agriculture, which also increases financing to this politically contentious agriculture incentive. In a quest to meeting the policy targets, most subsistence farmers are clearing more land for agriculture and thereby contributing significantly to deforestation and forest degradation. The REDD+ incentives must, therefore, be able to counter this counter-incentive for it to succeed in addressing agriculture-driven deforestation and forest degradation. However, the present incentives do not provide certainty and amounts are seemingly inadequate to match up to this incentive and will thus fail to sustainably move people away from their present forms of livelihood.

The Uncertainty of Flow and Sustainability of the Incentives

The incentive approach as proposed by UNFCCC and supported by the North was not clear on the flow and sustainability of the finances promised. This study found that national experts working on REDD+ in Zambia are still guessing what the incentive structure will look like going forward.

In fact, the national experts are of the view that REDD+ incentives would end once there was a change in political discourses about climate change in countries that were providing those incentives. This was also noted by Clements, (2010) who said that politicians and local communities who have made commitments to REDD+ may become disillusioned if financial transfers are not forthcoming. There is no clarity of finance even in the Zambian strategy on how it can mobilize resources to finance REDD+ beyond the international financial structure. The carbon markets which REDD+ is also looking to for sustainability is another idea that remains under question with many national actors as well as REDD+ international commenters raising concern as to whether this market is the viable route to sustain REDD+. This lack of clarity after ten years of REDD+ being in existence is a cause for concern on whether the incentives will deliver on the central objectives of the mechanism or not.

Although the incentive approach excites the political and economic interests of developed as well as the developing countries, it is, however, unable to break the local and economic interest surrounding agriculture and energy which are the main drivers of deforestation and degradation.

8.4 How Political and Economic Interests Impact REDD+

Despite the many uncertainties and looming failure for the incentive-based REDD+, its financiers, as well as implementing countries, are still going ahead to try and implement the strategy. In fact, in some countries, REDD+ contracts, some with duration of up to 20 years, have been signed between private companies/entities from the developed states and communities in some developing countries with a view of meeting the central objective of reducing GHG emissions from forests.

However, the question that begs an answer is why is this so? To respond to this study undertook to evaluate the underlying interest of actors and how this interest was aiding or hindering REDD+ in meeting its central objectives of reducing emissions from deforestation and forest degradation. It is important to note that REDD+ is governed under a top-down global climate change regime that favors the rich actors over those who merely participated (Atela et al. 2016; Shaw 2015) in the process.

Although the REDD+ mechanism is expected to be implemented in tropical developing countries, control of the programme is in the hands of rich countries that generate the ideas, provide finance

and participate in the localization of the programme. This study found that this type of governance regime has affected the structure and focus of Global REDD+ away from pursuing effective solutions for addressing drivers of deforestation and forest degradation (such as investment in clean energy) to merely focusing on fulfilling conditions driven by political and economic interests of individual states and consented to by poor states. In addition, other stakeholders like private companies, multinational institutions; civil society organizations as well as local institutions extend the influence of developed nations in national REDD+ programmes and offer very little hope for suggesting radical changes to the programme (Atela et al. 2016; Shaw 2015). For example, the FAO, UNEP, and UNDP have been actively involved in approving and financing REDD+ programmes and research in Zambia as well providing technical guidance to the REDD+ coordinating unit on how the national REDD+ strategy should look like. The main role of these agencies to ensure that the REDD+ implementing country adheres to the globally set standards and rules and facilitate the securing of consent for REDD+ projects from local communities.

The findings that this study makes clearly show that developed nations are interested in having national REDD+ strategies that are cheaper and 'politically correct' as opposed to addressing the expensive fossil-fuel energy and transport-related greenhouse gases. Developed states are also interested in a REDD+ mechanism that focuses on addressing agriculture led deforestation. This, however, has resulted in underappreciating other important drivers of deforestation and forest degradation such as energy deficits. The REDD+ financiers seem not ready to finance large-scale investment such as in renewable energy like solar and geothermal which would radically address the energy led deforestation and forest degradation in most developing countries. This is despite the evidence that energy demand was the main driver of deforestation and forest degradation in many developing countries that were participating in REDD+.

This study has found that relying on their material power, developed nations continue influencing beyond state boundaries REDD+ policy designs as well as national legal and institutional reforms that align with their national financing policies and interests. These moves, however, perpetuate the idea of dependency in which developing countries continue looking to developed nations to run programmes and thereby putting a question on the issues of self-governance, programme ownership, and sustainability.

The REDD+ mechanism thus finds itself in the fight for legitimacy and acceptance by local people. A clear example noted during the study is a situation in which local experts while participating in the REDD+ national readiness process, still felt disconnected from the mechanism and its proposed ideas.

It is also clear REDD+ was accepted by technocrats of developing countries because of the interest to receive funding which is promised in form of preparatory grants and performance-based incentives. This is against their belief that in its present frame mechanism could not significantly address the drivers of deforestation and forest degradation. Therefore, the REDD+ mechanism is simply another programme to support the already underfunded forest departments and did not propose anything new or radicle that has never been tried in these countries and did not achieve much in the past.

From the foregoing, there is a reason to conclude that the current REDD+ mechanism is clogged up in economic and political interests that make it difficult for it to respond to problems in a way that is not only cheap but also radical and effective to solve the problem of global warming. This and the problem with the definition of drivers as well as the use of a defective incentive structure, it is therefore clear that REDD+ will not have a significant impact on addressing drivers of deforestation and forest degradation and subsequently supporting development for the south.

8.5 Key Findings

The focus of this study was to analyze the REDD+ mechanism and determine its ability to achieve its central objective of reducing greenhouse gas emissions, enhancing conservation and supporting sustainable development in developing countries like Zambia.

The study began by evaluating how the problem of deforestation and forest degradation was conceptualized and defined by international and local REDD+ actors and how it was localized in national REDD+ strategies. The study then evaluated the recommended REDD+ strategies to ascertain whether they would effectively address the problems driving deforestation and forest degradation in countries like Zambia. Further analysis of the design of the REDD+ policy focussing on the interests and agency of actors both from the international and national stages was undertaken to understand how they aided or hindered the development of new and effective strategies during the preparation phase of REDD+.

The study has found that in its present frame an incentive REDD+ will be unable to meet its central objective of reducing greenhouse gas emissions in Zambia and support the countries sustainable development. Three key findings justify this position:

Firstly, it was found that there were problems in the way drivers of deforestation and forest degradation are described and rated. This made the REDD+ strategies underappreciating other equally critical drivers of deforestation and forest degradation such as energy (Jessica. L, Chandra. Lal and Zachary. A, 2016). Actors in REDD+ have given much attention to addressing agriculture drivers of deforestation or using agriculture (Agroforestry) to solve many other drivers and have and paid little attention to a critical and most rampant driver which is demand for energy.

What is evident in the case of Zambia and in most documents from international actors on REDD+ is that energy was presented in a disintegrated form as either charcoal production, use of wood fuel, use of wood for drying tobacco, and use of timber in industrial kilns. As fragments their contribution to deforestation is underrated and agriculture is seen as the main problem. The different ways of use of 'wood energy' are further placed under drivers of forest degradation only and are not considered as drivers of deforestation. Because REDD+ actors seem to favor addressing deforestation as presented in chapter 6, placing energy as only driving forest degradation takes away the attention from this driver and consequently underappreciating it both in strategic focus and finance.

However, this study found that wood energy was one of the main drivers of both deforestation and forest degradation. For REDD+ to be effective, therefore, it must provide strategies that are far-reaching to address the real and main drivers of deforestation. However, the REDD+ strategies currently suggested in national plans are not new and radical enough to effectively effect change in the use and demand for wood energy and end forest cover loss. The activities recommended under REDD+ included such activities as enhancing the use of efficient charcoal stoves and establishing of woodlots. It was found that large-scale investments such as in solar, geothermal or hydro, energy are not being supported under the greater incentive concept of REDD+ that want to focus on non-energy activities.

The impact of this failure to properly describe the problems driving deforestation and forest degradation and focusing on one driver (agriculture) has negatively affected the composition of

institutions tasked to lead in the implementation of the REDD+ mechanism in Zambia. For example, the study found that important energy institutions like Zambia Electricity Supply Cooperation (ZESCO) and the Energy Regulation Board (ERB) were not actively involved in the process of developing the national REDD+ policy and are not part of the leading institutional framework for addressing deforestation and forest degradation. The study also found that major national energy investments are not considered for a reward under the REDD+ performance-based payments even though they have a direct impact on deforestation and forest degradation. This means that although changes in energy prices, efficiency in clean energy supply and number of people connected to the grid had a direct impact on the use of wood fuel and subsequently the rate of deforestation, there was no interventional relationship provided in REDD+ strategies to effectively reward or cushion their impact.

The second important finding this study makes is on the challenges of using incentives as proposed in the REDD+ mechanism. The study finds that the incentives would be inadequate, and does not clearly provide information on flow, sustainability and on how the common person on the ground was going to benefit.

The study also found that there are a number of burriers that the REDD+ incentive needs to overcome but had no jurisdiction to counter them. In the case of Zambia for example, there is a government-funded agriculture incentive which is given to farmers annually to increase agriculture yields. This incentive is supported by a policy on economic diversification away from dependency on mining to agriculture. For REDD+ to succeed, it must counter the social economic and political interests embedded in such a government policy as this one and provide even better strategies to improve livelihoods within and outside the forest communities.

On flow and sustainability, the study found that it was still not clear on how the REDD+ will be financed going forward. Carbon markets or through bilateral agreements? However, if REDD+ will be designed as in the way pilot projects so far implemented in some REDD+ countries are, then the incentive flow will depend largely on the contract terms entered between the community and international agencies or private companies. The study, however, found that such conditional payment will be made at very long intervals and would not be guaranteed unless the community satisfies the conditions of the contracts. The fear from national REDD+ experts from Zambia, for

example, was that if REDD+ future was going to solely depend on carbon markets, the programme would have little chance of surviving because markets were very uncertain[3].

These uncertainties on flow and sustainability of the incentive threaten the mechanisms ability to shift people from their current forms of livelihood and engage in REDD+ supported activities which is one of the outputs that REDD+ mechanism wants to achieve.

The third important finding that this study makes is on the governance of REDD+ in terms of interests and agency of actors at international and national levels. The study found that REDD+ is implemented under the climate change governance structure that has been criticized for its undemocratic and skewedness towards supporting the interest of rich and powerful states. These countries have been able to generate scientific ideas, send a large contingent of participants in negotiations, form many alliances and finance the climate change programmes beyond their national borders. The study further found that the REDD+ process has been played in a top-down approach led by these elite states that use non-state actors such as the UN-REDD, and FCPF to seek consent and gain control of the mechanism in other developing countries. For example, the study found that non-state actors and multinational companies who were both the financing agents and technical experts had stronger agency in the development process of the national REDD+ strategy for Zambia affecting the nature and focus of the strategies. The REDD+ strategy development process responds to rules and standards set at the international arena and not to the local context situations. The study further found that attempts to deviate from the international guidelines meant missing out finances or delay in moving into the implementation phase of the programme. This rigid governance structure, therefore, makes it difficult for national and local stakeholders to own the REDD+ programme and thus negatively affecting its' potential to meet its central objective or its ability to adapt.

Because of the above factors, the study, therefore, accepts the research hypothesis which states that 'incentive-based REDD+ will fail to meet its central objective of reducing greenhouse gas emissions from forests and supporting sustainable development in developing countries like Zambia.

[3] Carbon Market Lessons and Global Policy Outlook ENVIRONMENTAL ECONOMICS Richard G. Newell, William A. Pizer and Daniel Raimi (2014). www.sciencemag.org seen 11/08/2017

8.6 Contribution to knowledge

8.6.1 Contribution to Theory

This study used a neo-Gramscian political economy lens and its concepts of hegemony, historic bloc, passive revolution and war of position to analyze the REDD+ mechanism.

The thesis has made a contribution to this growing use of critical theoretical approaches in understanding and explaining the governance of global climate change instruments such as REDD+. It has demonstrated that Neo-Gramscian approaches are useful in bringing out underlying interests, influences and interactions of state and non-state actors in driving and controlling global climate change programmes (Cox, 1983; Bieler, 2001; Robinson, 2004; Matt and Okereke, 2014). It has shown how rich states come together as a 'historic bloc' around a common interest of having a cheaper mitigation strategy and push for its acceptance by poor states through the use of finances and ideas aided by non-state actors. This bloc supports REDD+ on the basis that it is a cheaper mitigation strategy as opposed to addressing fossil energy and transport.

The thesis has also shown how global terms and narrative of REDD+ have been driven down to national REDD+ processes and used to affect the nature of strategies; their focus as well the mix of national institutions to lead the mechanism. In a case of Zambia, for example, the thesis shows how 'energy' institutions like Zambia Electricity Supply Cooperation (ZESCO) and Energy Regulation Board (ERB) are not active parties to the national framework to oversee REDD+ implementation despite energy being the major driver of forest cover loss in the country.

The thesis makes a clear observation in the use of non-state actors as consent seeking and legitimizing agents of REDD+ ideas and interests of the rich states. Financial superiority and their position as 'experts' gave these actors stronger agency in the REDD+ processes in developing countries like Zambia. The thesis has shown that by merely promising financial rewards, REDD+ was received and consented to by poor states who are interested in the money to supplement their poorly funded environmental sectors. These countries did not consent to REDD+ with the belief that the mechanism will achieve its central objectives but because doing so was a new condition to access extra finances from the international community. The example is seen from experts in Zambia who said did not see anything radical or new in REDD+ compared to past and similar programmes (JFM; CDM) that did not leave a significant impact in the management of forests.

The thesis finds that material interests were the motivation driving passive revolution ideas and securing consent for REDD+ than the mechanisms set objectives of reducing greenhouse gases, enhancing conservation and supporting sustainable development. The thesis also shows that the promise of incentives as well as the coordinated alliances involving states of developed nations (bilateral agencies) and international non-state actors (UN-REDD+; FCPF) made it difficult for developing states to counter REDD+ in a war of position. An attempt to shift or suggest radical strategies outside the globally set guidelines and rules means to delay or not receiving finances for implementing such strategies. Developing countries are in a hurry and shoehorning their strategies to reflect wishes and interests of the financiers so as to qualify for the Early Movers Funds promised by rich states.

The study has shown how Neo-Gramscian concepts of the historic bloc, passive revolution, and war of position are useful tools in understanding and explaining the underlying interests and influences shaping global climate change instruments like REDD+ which are multi-actor multi-scale programmes. The study will also show that while the dominated group is unable to counter the passive revolution strategies of the dominant group, the concept of war of position is a useful lens that helps the researcher appreciate the power of the historic bloc and its use of passive revolution strategies to gain and maintain its hegemonic status.

8.6.2 Contribution to Policy and Practice

The REDD+ mechanism is a new climate change strategy that is part of the Paris Agreement of 2015 that is still seeking ways and avenues of implementation to achieve its greater objective of abating climate change. It is currently set out to run in three phases (Visseren-Hamakers & Vijge 2012; USAID 2015; Mining & van Noordwijk 2014). Preparation phase, trial phase, and the implementation phase. From 2009, a number of developing countries including Zambia were selected to pilot REDD+ with a purpose of generating information for the out-scaling of the programme across the globe (UNFCCC, 2015b; Pasgaard *et al.*, 2016; Turnhout *et al.*, 2016).

Therefore, the findings of this study make a significant contribution to the body of knowledge that is being used in the design of national REDD+ strategies and policies. It has shown the problems in defining the problems driving deforestation and forest degradation and shows how this was critical for REDD+ to succeed. This study found that the way international and local (Zambia) actors define drivers of deforestation and forest degradation was problematic and was affecting the

focus of strategies and subsequently the potential of the policy to meet its central objectives. For example, while this study found that energy was the main driver of both deforestation and forest degradation the international and national REDD+ strategies that were developed did not classify 'Energy' as the main driver of both deforestation and forest degradation. Subsequently, the REDD+ strategies and finance have underplayed energy which is one of the main drivers of forest cover loss and only paid much attention to addressing agriculture drivers.

The thesis has also shown why the incentives suggested under REDD+ will likely fail to break the social economic and political barriers behind drivers of deforestation and forest degradation in countries like Zambia. The study found that REDD+ conditional incentives are inadequate, uncertain on flow, uncertain on sustainability and were promised to come (or not) at long time intervals. This, therefore, threatens the sustainability of interventions as well as the entire REDD+ programmes potential to succeed.

This study has further shown that large-scale investments made by a developing country such as in energy did not feature for rewards under REDD+. In the case of Zambia for example, the developed national REDD+ strategy does not capture any investment the country makes in the generation of clean energy and how such could be rewarded under the incentive-based REDD+. It should be noted that such findings are important for shaping policy focus and intervention in the fight against deforestation and forest degradation driven by energy deficits.

Based on these findings this thesis suggests that there be a shift in the way drivers of deforestation and forest degradation are described to give a clear and true nature of the problems driving deforestation and forest degradation. This should also be followed by designing radical strategies that focus on getting the job done by addressing the real drivers in a country context. The incentive structure of REDD+ will also require restructuring to include large scale investments such as in renewable energy to address the energy led deforestation and forest degradation which is clearly one of the main drivers of both deforestation and forest degradation.

For all this to happen, this thesis suggests that REDD+ be renegotiated from a more precautionary and normative position and not from the cost-saving position that puts financial/ economic interests above the urgent and serious need to save planet earth.

8.7 Areas for Future Research

The REDD+ programme is generally in its infancy as a new climate change mitigation strategy designed with the purpose to stop over 20% of global greenhouse gases from the forests (Reinecke, Pistorius and Pregernig, 2014). Studies about REDD+ have focussed on governance, finance, rights and sustainability of the mechanism (A. (eds) Angelsen, 2009; Corbera and Schroeder, 2011a; Lederer, 2011; Cadman and Maraseni, 2012b; McDermott *et al.*, 2012; Mulyani and Jepson, 2013; Robiglio *et al.*, 2014; West, 2016). A number of researchers have also questioned the idea of using carbon markets to finance REDD+ programme and its possible challenges and opportunities (Sandbrook *et al.*, 2010; Streck, 2010; Hiraldo, Tanner and UNRISD, 2011; den Besten, Arts and Verkooijen, 2014; Gallemore and Jespersen, 2016). Others have argued about the existing governance challenges in developing countries that was likely to be a hindrance in getting REDD+ to achieving its objective (Hervey, 2012; Kokwe, 2012; Kalaba, 2016). Suggestions and proposals on structure and process of REDD+ have been made aiming to pilot the mechanism and draw lessons for improvement and refining of the whole mechanism (Okereke and Dooley, 2010; Olander *et al.*, 2011; Wehkamp, André Aquino, *et al.*, 2015).

This study has also contributed both to the knowledge on theory, policy and practice of the REDD+ mechanism.

However, there are other areas that need further research and exploring particularly in the case of Zambia to make a further contribution to the much-needed knowledge for making REDD+ succeed in meeting its normative objectives. They include the following:

- To explore ways of redefining drivers of deforestation and forest degradation in ways that are simpler and reflective of what they really are and their contribution to GHG emissions
- To explore the possibilities of linking large-scale national energy investment to performance-based payments for addressing deforestation and forest degradation in developing countries.
- To explore the impact of other government policies such as agriculture incentive on the fight against deforestation and forest degradation in Zambia.
- To explore the national and local financing options available to finance REDD+ activities to address the flow and sustainability uncertainties that this research found

- To explore how other governments developmental policies and decisions impact the fight against deforestation and forest degradation in Zambia.
- Conduct a study to establish the rate of energy-led deforestation and forest degradation and deforestation and determine the actual contribution of energy-driven deforestation and forest degradation to the national rates of forest loss.

8.8 Chapter Summary

This chapter has provided an overall conclusion of the study highlighting the key findings that the research makes about the feasibility of REDD+ achieving its central objectives. The chapter has further presented the contributions that the study makes to the body of knowledge. Particularly the contribution to theory and how neo-Gramscian political economy perspectives helped explain the underlying interests and power influences behind strategies and ideas in REDD+. It is clear from the study for example that material power (financial superiority) was more pronounced in gaining strong agency and legitimacy in the national REDD+ policy process. This made developed nations through the non-state actors extend control and influence of the REDD+ process beyond their borders by providing and or promising finances.

The chapter has further shown how the research makes a contribution to the development of policies and their implementation. For example, the chapter has given a clear account of important findings of how REDD+ mechanism was problematic in defining the problems driving deforestation and forest degradation in developing countries. The chapter has also shown how the proposal of using incentives for addressing deforestation and forest degradation would not significantly help in slowing or halting forest cover loss in developing countries.

Lastly the chapter has made suggestions on the areas for further research to better understand and find options that would help in reshaping REDD+ into a more responsive mechanism that can radically address the drivers of deforestation and forest degradation.

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10 APPENDICES

Appendix A: Content analysis from the expert interviews

Table 10: Perceptions on Drivers of Deforestation and Forest Degradation

Meaning Unit	*Condensed Meaning Unit*	*Code*	*Category*
THEME: Perception on Drivers of Deforestation and Forest Degradation			
With the energy challenges in Zambia, charcoal production to meet the energy needs is now making charcoal production becoming a main driver of deforestation	Charcoal production to meet the energy needs is now making charcoal production becoming a main driver of deforestation	Agriculture	
Able agriculture practices and opening up of new land for agriculture	Agriculture and Wood-fuel Main drivers	Agriculture and Energy	
The main drvers of deforestation in Zambia are agriculture and Woodfuel	Agriculture and wood fuel	Agriculture and Energy	
The main driver of deforestation in Zambia presently is agriculture and also the charcoal production to meet the energy demands in our communities. The other one is the use of wood in the manufacturing of bricks as well as in drying tobacco	Main drivers of deforestation are agriculture and Charcoal	Agriculture and Energy	
They are quiet many but the important ones are Agriculture and Charcoal production. When I talk about agriculture not as a sector but a practice. You know the way we practice agriculotuer in this	They are quiet many but the important ones are agriculture and charcoal production	Agriculture and Energy	

country is that we clear a huge chank of land and sometimnes burn and or uproot and burn the area before we cultivate			
There are several drivers of deforestation but the major one are: the high shortage of sources of clean energy for domestic use	high shortage of sources clean energy for domestic use	Energy	Main Drivers of Deforestation and forest degradation in Zambia
The main driver of deforestation in Zambia is crop farming. As you know as population is growing there is also increased demand for land. The other main driver is the issue of energy deficits leading to increased charcoal production and consumption of wood fuel	The main driver of deforestation in Zambia are crop farming, Increased charcoal production and consumption of wood fuel	Agriculture and Energy	
Drivers of deforestation are: Harvesting for Timber; Unsustainable agricultural practices and Charcoal production which should be rated number one driver.	Harvesting for Timber; Unsustainable agricultural practices and Charcoal production	Agriculture and Energy	
In my opinion charcoal production should be rated number one because agriculture does not involve opening up new areas every year whereas charcoal production new areas open up every year	charcoal production should be rated number one because agriculture does not involve opening up new areas every	Energy	
Lack of sufficient alternative sources of energy besides wood or charcoal. As you know only 22% of the people in Zambia are connected to the electrical grid and 78% are not, so demand for energy is first	Lack of sufficient alternative sources of energy besides wood or charcoal	Energy	
Its very difficult to pin point the main driver of deforestation, but agriculture is one of them. It is motivated by fertilizer incentives that they get from the government and the cultivation of mono crop which is maize	Its very difficult to pin point the main driver of deforestation, but agriculture is one of them	Agriculture	

Energy and particulaly charcoal production, is considered as a proximate driver. Chracoal production is more a driver of degradation and not deforestation.	Energy and particulaly charcoal production, is considered as a proximate driver	Energy	Main Drivers of Deforestation and forest degradation in Zambia
With the energy challenges in Zambia, charcoal production to meet the energy needs is now making charcoal production becoming a main driver of deforestation	energy needs is now making charcoal production becoming a main driver of deforestation	Energy	
The main drivers of deforestation in Zambia are energy demand and agriculture. As you are aware most of the energy mix or energy used for cooking in urban areas is charcoal and a result of that there is a huge amount of deforestation taking place and that has been reflected even in our climate change report	The main drivers of deforestation in Zambia are energy demand and agriculture	Agriculture and Energy	
Empirical data suggest that agriculture and Energy are the 2 main drivers of deforestation	Agriculture and Energy are the 2 main drivers of deforestation	Agriculture and Energy	
Even the report on drivers of deforestation, which we produced for REDD+ preperation phase must be re-looked at to reposition charcaol or energy led deforestation as main driver of deforestation	REDD+ preperation phase must be re-looked at to reposition charcaol or energy led deforestation as main driver of deforestation	Energy	
The main driver of deforestation in Zambia presently is shortage for energy. Almost everyone in Zambia is resorting to using Charcoal as a cheaper source of energy	The main driver of deforestation in Zambia presently is shortage for energy	Energy	

The Farmer Inputs Support Programme (FISP) provides subsidies in form of seed and fertilizer to farmers without clear management of the amount of land the farmer was going to get. Therefore, for those that got more inputs, they wanted huge pieces of land for them to produce more	Therefore, for those that got more inputs, they wanted huge pieces of land for them to produce more	Agriculture
The national agriculture policy as included in the national vision 2030 plans to increase agriculture production by adding over 90, 000hactors of land to the current agricultural land	vision 2030 plans to increase agriculture production by adding over 90, 000hactors of land to the current agricultural land	Agriculture

Table 11: Perceptions on Implementation and Novelty of REDD+

Meaning Unit	*Condensed Meaning Unit*	*Code*	*Category*
Theme: Implementation Challenges and Novelty of REDD+			
We have had good and reasonable policies and laws to address deforestation but the problem has been on implementation of the legislation. The practical part is the problem	Problem has been implementation	Challenges with Implementation	Challenges and Novelty of REDD+
The money doesent actually get to the local community much of it ends with the middle men who get the bulk of it. I am not sure on which thrust it will be hinged on. In my View REDD+ is what every government should be doing if they funded their forest sector properly.	The money doesent actually get to the local community much of it ends with the middle men who get the bulk of it	Challenges with Implementation	
There is nothing new in REDD+ compared to past interventions. The only different thing is the linking of the sale of carbon.	There is nothing new in REDD+ compared to past interventions	Challenges with Implementation	
REDD+ is calling for land use planning, sustainable forest management, but we have been doing these things in the past there is nothing new.	There is nothing new in REDD+	Nothing New About REDD+	

In reality REDD+ is only trying to remind us that we rethink and harmonise these things so that we generate a good result.	Only trying to remind us that can we rethink and harmonise these things	Nothing New about REDD+
The whole concept of REDD+ hinges arround sustainable forest management, and ideally for every forester who is trained you will see that there is nothing new apart from the incentives it presents which in actual sense they are just promises that never come down to the people.	There is nothing new apart from the incentives it presents which in actual sense they are just promises that never come down to the people	Nothing New about REDD+
Deforesatation rates have been increasing clearly indicating that the forest policies in the past have failed. This is mainly because they have lacked implementatiion and support from the government	The forest policies in the past have failed. This is mainly because they have lacked implementatiion and support from the government	Challenges with Implementation

Table 12: Perception on REDD+ ownership and Interests of Actors

Meaning Unit	*Condensed Meaning Unit*	*Code*	*Category*
Theme: REDD+ Ownership and Interests of Actors			
Donors in many cases push for their own agenda rather than country agendas.	Donors push their own agenda	Donor advancing own interest	**Lack of Participation and Actor interests**
Those with the money drive the ship.	Money drives the ship	Donor advancing own interest	
I think donors are merely responding to their global responsibility to the pollution that they have been and continued emitting	Responding to their global responsibility to the pollution that they have been and continued emitting	Donor advancing own interest	
So at the end of the day the donors are the ones driving the agenda.	Donors are the ones driving the agenda.	Donor advancing own interest	
While donors may genuinly be driven by the challange of climate change they still push their national economic interests and other conditions	Donors still push their national economic interests and other conditions	Donor advancing own interest	
Most of such programes are developed already at higher level	Programmes developed at higher level	No Local participation	
These strategies like REDD+ as you are aware they are not community developed but people expect the community to play an active role in implememniting	REDD+ Not community developed	No local Participation	

Its more of imposing rather than addressing a felt need by a group of people and a totality of that people making up a countries strategy	More of imposing rather than addressing a felt need by a group of people	No local participation
As much as consultants go round collecting views of the community, that is not participation, that is the views of the conultants and is the position of donors	consultants go round collecting views of the community, that is not participation, that is the views of the conultants and is the position of donors	No local participation
If you dont follow their (donors) conditions, you risk not receiving any more funding	If you don't follow donor's conditions, you risk not receiving any more funding	Donor advancing own interest
Some of those conditions, we do them because we have no options and not that they are the best options	we do them because we have no options and not that they are the best options	Meeting Donor Conditions
You know, we understand our situation better than anyone else but because we do not have the money, we have no option but to follow the conditions of the one financing the programme	we have no option but to follow the conditions of the one financing the programme	Meeting Donor Conditions
But generally with experinece, donor money comes with conditions which we must subscribe to for us to access the money.	donor money comes with conditions which we must subscribe to for us to access the money.	Meeting Donor Conditions
So even if the donors play a key role I do believe that they are also playin double standards when it comes to REDD+ implementaion	they are also playin double standards when it comes to REDD+ implementaion	Donor advancing own interest

Table 13: Perceptions on Extent to which the incentives can help REDD+ meet its objectives

Meaning Unit	*Condensed Meaning Unit*	*Code*	*Category*
Theme: Extent to which incentives can help to achieve REDD+ objectives			
They promise so much money but only releases little that also ends up with government agencies while the communities are told to wait in perpetuity.	promise so much money but only releases little	Inadequacy of Finances	**REDD+ Incentives and its effects**
I personally think that in its current framing and structure, the REDD+ cannot deliver on its global objective. The reason being that as long as the alternative source of livelihood such as agriculture, charcoal production etc. offers more economic benefits for the individual or the people themselves than incentives from REDD+ then it will not deliver on those objectives.	as long as the alternative source of livelihood such as agriculture, charcoal production etc. offers more economic benefits for the individual or the people themselves than incentives from REDD+ then it will not deliver	Not certain on sustainability and amount	
The current REDD+ conversation and discussion is more focused on the carbon credits and this is where the problem is. I am not very comfortable with the current REDD+ approach because it has mainly focused on carbon credits	Not very comfortable with the current REDD+ approach because it has mainly focused on carbon credits	Not certain on sustainability and amount	

They promise so much money but only releases little that also ends up with government agencies while the communities are told to wait in perpetuity.	Money ends up with government agencies while the communities are told to wait in perpetuity	Misapplication of Finances
But if the incentive or the bulk of the incentives come from carbon sells but carbon is tide to a price on the market. So what if the price goes down, what happens to the community? what about sustainability? you need to know that such programmes run well when finances from donors are flowing but once they cease then the projecta also dies.	such programmes run well when finances from donors are flowing but once they cease then the projecta also dies	Not certain on sustainability and amount
For example, we have seen building projects funded by donors and these projcts have ended up as while hourses.	we have seen building projects funded by donors and these projcts have ended up as while hourses	Not certain on sustainability
Donor projects often end with the end in flow of donar cash.	Donor projects often end with the end in flow of donar cash	Not certain on sustainability
The monetary benefits in REDD+ is what makes REDD+ different from the former forest management interventions. I am expectant of the REDD+ approach in terms of delivering on its objective but am also skeptical in terms of how much per capita benefits the local people will get from it	I am expectant of the REDD+ approach in terms of delivering on its objective but am also skeptical in terms of how much per capita benefits the local people will get from it	Less benefit to local people
I am also happy that they have (REDD+) tried to tackle deforestation from the economic or livelihood angle. But I am not happy because when I sat down to look at or calculate	When I sat down to look at or calculate an estimate of per capita benefit from	Less benefit to local people

an estimate of per capita benefit from REDD+ incentives I found that it was not as much.	REDD+ incentives I found that it was not as much.	
My estimate showed that people would get far less than a dollar/day	people would get far less than a dollar/day	Less benefit to local people
I am also not happy with the bureaucratic management structure which I think will not escape the possibility of corruption.	Will not escape the possibility of corruption.	Less benefit to local people
I also fear that most of the incentives money may and or will end up going towards administrative needs, allowances, and all sorts of workshops	money may and or will end up going towards administrative needs, allowances, and all sorts of workshops	Less benefit to local people
There is no free lunch in this world and whenever donors finance programmers like REDD+ the greater benefits go to them.	whenever donors finance programmers like REDD+ the greater benefits go to them`	Less benefit to local people
But I expect donors to also play a more involved role in monitoring the money and ensuring that the money gets to the person on the ground.	monitoring the money and ensuring that the money gets to the person on the ground	Less benefit to local people
REDD+ is a good programmer as it provides an incentive to the community for protecting a forest.	REDD+ is a good programmer as it provides an incentive to the community for protecting a forest	Incentives to provide alternative livelihood

Most people in these communities would opt to get a different kind of Job to earn a livelihood away from charcoal production which most people say it's a tedious undertaking	REDD+ will provide different kind of Jobs to earn a livelihood away from charcoal production	Incentives to provide alternative livelihood
The incentives may help in one way or the other in reducing GHG but the big question would be on sustainability	The incentives may help in one way or the other in reducing GHG	Incentives to provide alternative livelihood
The incentives may help in one way or the other in reducing GHG but the big question would be on sustainability	big question would be on sustainability	Not certain on sustainability
An incentive can only guarantee success if it will always be there.	An incentive can only guarantee success if it will always be there.	Not certain on sustainability
I would rather REDD+ took both an incentive and Investment approach. This would in the long run take care of the sustainability.	Investments would take care of the sustainability.	Not certain on sustainability
I think the idea of incentives can help minimize deforestation to acceptable levels because many people depend on the trees for survival.	Incentives can help minimize deforestation to acceptable levels	Incentives to provide alternative livelihood

If given a different source of income they may reduce on cutting down trees	Different source of income they may reduce on cutting down trees	Incentives to provide alternative livelihood
Donor funds normally have a life span and once they stop coming then the programmer stops	Once they stop coming then the programmer stops	Not certain on sustainability
The idea of incentives might work as an alternative source of income	Might work as an alternative source of income	Incentives to provide alternative livelihood

Appendix B: Expert Interviews: Generic Semi-Structured Questionnaire for National REDD+ Experts in Zambia

1. **Introductions:**

My name is Brian Chirambo. I am a Ph.D. research student of Human Geography at the University of Reading, UK. My research project is largely around Global Climate Change governance, specifically evaluating the REDD+ programme as a global policy for addressing deforestation Led GHG emissions**.** The data from this interview will be purely used for academic purposes.

2. **Setting the problems:**
   - What do you think are the main Drivers of Deforestation?
   - What is your say on Energy Led deforestation
   - What is your say on Agriculture Led deforestation
   - Is Zambia's financial and institutional setting adequate to deal with deforestation
   - How best do you think deforestation in Zambia could be managed?
3. **Assessing Past and Current Interventions in dealing with deforestation**
   - Are you aware of any Policies for addressing deforestation in Zambia?
   - How have these policies fared?
   - What is the Institutional arrangement for addressing deforestation in Zambia?
   - How has this arrangement helped in addressing deforestation?
   - What do you think has and is the major challenge?
   - How is the financing regime for forestry management like in Zambia?
   - Are there challenges in the financing system and what are the main ones?
4. **About REDD+/ UN-REDD+**
   - Are you Aware of the REDD+ programme?
   - Is it different from past interventions?
   - Are you Happy with it?
   - What is your role either personally or as an institution in the REDD+ programme?

- What do you think its main agenda is and how different is it from past interventions?
- Do you think it will achieve its intended objectives (Reduce Deforestation & Bring about Sustainable development) and why?
- How best do you think it should have been designed and managed?
- Has it been a smooth-running programme?
- What are the main challenges that you face in this programme?
- Has REDD+ adequately provided room to address energy led deforestation?
- What measures are being proposed to deal with energy led deforestation?

Donors and National REDD+ Strategies

5. Who is financing the REDD+ projects: In terms of cooperating partners
6. What kind of support have you received and from who? Is this support consistent?
7. Who do you report to and how is the reporting schedule like?
8. Who sets deadlines?
9. How much political will/Support is this programme receiving locally?
10. How would you rate the participation of the local people in this project?
11. Are you aware of any other country that is implementing this programme?
12. How do you compare Zambia's Strategy to that of other countries?
13. Who are the main international stakeholders/ partners in this programme?
14. How much interest and support have they given into the programme?
15. Do you have their personal working on the programme with you?
16. In your own view do you think that the donors are influencing the direction of the whole programme
17. If you had all the finances, you need would you have pursued this kind of programme or what?
18. What do you think has or will be the major challenges in implementing the REDD+ programme in Zambia?
19. How best do you think these challenges can be handled or avoided?

REDD+ and Energy

20. What role are the energy institutions playing in the whole REDD+ programme?
21. Do you think that their current level of involvement is adequate? Why?
22. There is a huge link between deforestation and energy demand/ supply? Do you think REDD+ has provided adequate provision to deal with this challenge? explain
23. What is the current energy situation in Zambia?

Appendix C: Staff and Postgraduate Research SAGES Ethics Clearance Form

Name of the researcher: Brian Chirambo

School: School of Archaeology, Geography, and Environmental Sciences

Department: Geography and Environmental Sciences

Title of project: Addressing Drivers of Deforestation in Zambia: A critique of the UNFCCC Recommended REDD+ Methodology

Proposed starting date: 1st October 2015 **Proposed finish date:** 22nd October 2015

A brief description of Project:

My research is a critique of the UNFCCC recommended methodology for addressing deforestation and promoting sustainable development in developing countries. The study uses Zambia as a case example because it is one of the countries that was experiencing high rates of deforestation and was identified to pilot the REDD+ programme under the UN-led REDD+.

There are currently a number of activities under REDD+ that are taking place across the country both at community and institutional levels. Recently, the UN-REDD+ national coordinator for Zambia reported that the nation had established deforestation monitoring and verification (MV) centers across all the ten provinces of the country in readiness for full REDD+ implementation.

As part of my data collection process, I will be interviewing local experts on REDD+ and various key stakeholders within Zambia. The experts will come from both government departments and non-governmental organizations. The study will also involve interviewing selected numbers of the individual from the communities.

Methods

1. Face to face interview with REDD+ actors and experts in Zambia
    - Lusaka Province

- Copperbelt Province

Key informants will include

- National UN-REDD+ coordinator for Zambia
- Zambia Electricity and Supply Corporation (ZESCO) Operations manager
- Representatives from selected government ministries/departments
- NGOs and other Civil society organizations

Planned activities I will be undertaking while in Zambia

Date	**Activity**	**Purpose**
1- 2nd Oct 2015	• Interview with REDD+ National Coordinator Lusaka • Interview UNEP, FAO country Representatives	• To appreciate current activities and scheduled programmes • To interview REDD+ National Coordinator
5th to 9th October 2015	Interview government ministries and departments • Forestry Department • Ministry of Agric, Energy and Lands, Finance • ZEMA, ZESCO (Lusaka) • CSOs based in Lusaka	• To get stakeholder perception on REDD+ as well as their role in the framing of the national strategy
12-16th October 2015	• Academia (CBU/ UNZA) • CSO on Copperbelt • Individuals from the community	• To get stakeholder perception on REDD+ as well as their role in the framing of the national strategy • Energy use and perceptions on deforestation

19-20th October 2015 Follow-ups	• Follow-up interviews with other stakeholders	• To fill-up the gaps and capture other issues that might have arisen during the interviews with the identified stakeholders

Selection of participants in the Project: Participants will be selected from key institutions participating or with the potential to participate in the REDD+ programme in Zambia as guided by the National REDD+ coordinator

Anticipated number of people that will participate in this Study**:** 100

In submitting this form, I confirm the following:

1. To the best of my knowledge, I have made known all information relevant to the SAGES Research Ethics Committee and I undertake to inform the Committee of any such information which subsequently becomes available whether before or after the research has begun.
2. If this project is an interventional study, a list of names and contact details of the subjects in this project will be compiled and that this, together with a copy of the Consent Form, will be retained within the School for a minimum of five years after the date that the project is completed.
3. The Consent form includes a statement to the effect that the application has been reviewed by the University Research Ethics Committee and has been given a favorable ethical opinion for conduct
4. I have made arrangements for the storage and disposal of confidential information generated by my project
5. The proposed research will not generate any information about the health of participants
6. The proposed research does not involve children under the age of 16

7. The proposed research does not involve any person with learning difficulties or with any other mental impairment
8. The proposed research does not involve anyone in their capacity as an NHS patient or social services client
9. The proposed research does not involve anyone who is employed by or is a student of, the investigator
10. I have made arrangements for expenses to be paid to participants in the research

If you are not able to confirm all of the above, please contact Maria Shahgedanova (m.shahgedanova@reading,ac.uk) as soon as possible.

Signed 

……..……... (Researcher)

Date……02/09/2015…….....

…….. (PG Supervisor) Date …02/09/15….....