

NORWEGIAN UNIVERSITY OF LIFE SCIENCES



TRANSCENDING CHALLENGES OF ATTAINING DISTRIBUTIVE JUSTICE IN PRO-POOR
ACTIVITIES OF REDD-PLUS (REDD+): JUSTICE IN BRAZIL, VIETNAM AND TANZANIA.

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Master Thesis in International Environmental Studies: Natural Resource Management

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Declaration

I, Acanit Loyce Emuge, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature.....

Date.....

I extend my gratitude to my supervisor for writing insights, critics and literature suggestions; not forgetting my beloved family, Maro, for unceasing support through out my writing.
To God and Us.

Acknowledgment

There were challenges met in writing for instance challenge to get first hand information on the preference tests done on payment formats for the respective case studies. However, insights were allocated from preliminary reports, which informed the expressed preferred compensation formats outlined in the cases above. Another challenge imposed on the credibility of the comparison done here is that similar methods of research and data collection were used but a certain value of experiences of the researchers at the field could have affected or influenced relayed findings herein. It is unfortunate that these experiences and possible influences/constraints are not discussed because none was voiced in the extracts. Besides, all extracted findings are referenced and cited in text accordingly. The proceeding remarks made are of my understanding of the issues sighted at in the cases used. Therefore, I take responsibility of this work as my own and not representative of the opinions of my institute of study.

Acronyms

BBC	British Broadcasting Corporation
BFP	Bolsa Floresta Program
CBFM	Community based Forest Management
CBNRM	Community based Natural Resource Management
CDM	Clean Development Mechanism
CERs	Certified Emissions Reductions (Carbon credits)
CNA	Capacity Needs Assessment
COP	Conference of Parties
FAS	Amazonas Sustainable Foundation
GHGs	Greenhouse gases
ICDPs	Integrated Community Development Projects
IIED	International Institute for Environment and Development
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
MEA	Millennium Environmental Assessment
MJUMITA	Tanzania Community Forest Conservation Network
NAPE	National Association of Professional Environmentalists
NASA	National Aeronautics and Space Administration
NGOs	Non-governmental Organizations
PES	Payment for Environment/Ecosystem Services
PFM	Participatory Forest Management
PFES	Protection of Forest Ecosystem Services
REDD+	Reducing emissions from deforestation and forest degradation plus conservation
SNV	Netherlands Development Organization
TFCG	Tanzania Forest Conservation Group
UNFAO	United Nations Food and Agriculture Organization
UNFCCC	United Nations Framework Convention on Climate Change
WRI	World Resources Institute

Abstract

Climate change is a phenomenon whose data has set a base for discussion, debates and research, all influential to policy and action restructuring at all levels of natural resource use and governance. Often issues of justice have been highlighted only in justification of conservation and global sharing of costs and benefits of actions proposed. Little attention has been drawn to locals' perceptions of justice or rather distributive justice.

The question of mitigation and abatement actions, currently promoted, encourage and exercise incentive based motivational participation. Payment for environmental (ecosystem) services (PES) is one of the topped market instruments promoted with believe to ably address participation issues in conservation and climate change mitigation processes. This payment is also hoped to cause poverty alleviation and satisfaction (justice and equity) within all participants and concerned stakeholders in the climate change agenda.

Issues of low education, poor/bad relationships, and unclear property rights arrangements influence perceptions of distributive justice and choice of distribution channels. Consequently they will present implications for efforts towards reducing emissions from deforestation and forest degradation plus conservation (REDD+).

The main objectives of this thesis are; to illustrate variance in perceptions of justice i.e. the preferred payment formats and channels of distribution, relate to participants' education, property (tenure/land) rights and relationships with leaders, and to harness the likely implications for REDD+. The main question asked is; what are the locals' perception of distributive justice and how could these influence REDD+ initiatives?

This thesis continues to examine persistent challenges of using PES schemes whilst need to attain equity, herein expressed as distributive justice illustrated as preferred payment formats. An elaborated background, inclusive of key concepts held in the REDD+ agenda, is made to better understanding of the operations of REDD+ and its justification for use of PES schemes. A cross-continental comparative analysis of PES, experimented in REDD+ piloted in Brazil, Viet Nam and Tanzania, is made to illustrate perceptions of distributive justice in relation to the status of the participants' education, relationships and property rights arrangements.

From the literature reviewed, a theoretical understanding of variance in perceptions and definitions of justice is drawn from a Pluralists approach to distributive justice. This will then be applied as a base for understanding and justifying the variance in the locals' perceptions of distributive justice

The findings herein emphasize that focus on these factors; education, property rights, relationship (good leaderships and/ good governance) and test preferences, will yield viable solutions especially towards achievement of perceived distributive justice.

Distributive justice is a challenge attracting much attention at global spheres of sharing costs and benefits. However, the attention is here drawn towards justice in a local participant's perspective. Therefore, this thesis' main contribution, to REDD+ architectural planning and designing of particularly PES schemes, is to show the perceived distributive justice/equity at local-participant level. It subsequently emphasizes that distributive justice is attainable by tackling the above mentioned factors influential and related to one's choice of payment format and channel of distribution, hoped to deliver distributive justice in benefit sharing schemes such as PES schemes. The write up here is a comparative desk-top study, based on scholar publications and interactive opinions from reviewers and the writer.

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CHAPTER ONE

1 INTRODUCTION

Climate change, global warming in particular, is undeniably a threat to all human nature. It is notably affecting development sectors such as agriculture, water, health and infrastructure; and worse effects are predicted to be bound for poor nations and communities carrying out climate sensitive activities like rain-fed agriculture, among others (World Bank, 2012). IPCC estimates the temperature increase at 2 degrees Celsius (IPCC, 2010). Despite the fact that this temperature increase is by both natural and anthropogenic factors (human made), greatest focus is put on anthropogenic factors. This is because it seems easier to tackle the matter of climate change by working with people as compared to massive knowledge requirement for tackling climate change through the natural geological factors.

The early reactions were focused on the Sahel region, especially by English and French foresters who supported the ideology of 'Fortress conservation' (Basset et al, 2000). Since Fortress Conservation entailed restricted access to forest services, fencing, relocation and ban of human interaction with protected areas, objections arose from promoters and practitioners of participatory conservation into the 20th -21st Century. In the 21st Century, key responses to climate change, and in particular global warming, took a turn towards emphasized human participation in reduction of greenhouse gas (GHG) emissions especially under the banner of reducing emissions from deforestation and degradation (REDD). REDD is a term used in reference to a set of guidelines and possible means of reducing emission of greenhouse gases from deforestation and forest degradation. These guidelines can be implemented globally, nationally and regionally by any organization and or communities. Implementation of REDD is mainly done at project and pilot levels. These pilots aim at reducing deforestation that is estimated to cause 18% greenhouse gas emissions to the atmosphere, containing about 5.8 billion tonnes of carbon dioxide (Holloway and Giandomenico, 2009). Climate change mitigation will benefit from REDD in developing countries, especially since REDD initiatives are instilling incentives (proposed and exercised at pilot level) and promote policies that foster forest conservation. Furthermore, they indirectly protect biodiversity within conserved forests (Combes et al, 2008). Currently, REDD is implemented with an additional effort to alleviate poverty, often existent amidst forest dependent communities participating in the pilot projects. This additional effort of poverty alleviation, through participation in conservation activities, has created a transition of REDD to REDD-plus (REDD+). This effort towards poverty alleviation is being realized through exercise of payment for ecological/environmental services

(PES) schemes under the project name POVSUS-REDD. The term POVSUS-REDD stands for, 'Poverty and sustainable development impacts of REDD architecture; options for equity growth and development' (Movik et al, 2012). POVSUS-REDD+ operates as a multi country project (Movik et al, 2012), engaged in all various REDD activities such as implementation, measurements reporting and verification of actions in relation to pre-set goals.

PES schemes provide 3 possibilities of; encouraging participation towards conservation, meeting REDD+ goals of emission reduction and poverty alleviation, as well as providing compensation for participatory opportunity costs (see Combes et al, 2008). These PES schemes have ranged from Eco-tourism, bee-keeping within limits of protected areas, compensations in-kind and as cash, among others. These PES schemes are differently applied and preferred by participating communities and organizations. One of the challenges faced by use of PES schemes is to ascertain distributive justice within participants especially since measure of involvement and performance of individuals is different and payment preferences are different too. In agreement, Corbera (2012) noted that distributive implications of using PES schemes have already began emerging. More on this distributional justice challenge is presented in the following pages.

This comparative study based on cases from Brazil, Viet Nam and Tanzania will illustrate the above mentioned differences influencing performance and outcomes of using PES schemes. The lessons drawn from these cases will contribute highly to the establishment of PES schemes within REDD+ pilots planned and exercised in other countries such as Ghana and Uganda.

1.1 Problem statement

One of the currently dominant hypotheses held by many conservationists and climate change mitigation activists is that, the best way to achieve increased compliance to planned actions is by making payments or some sort of compensation to participants in their projects. This valuing of the ecosystem services may have drawn more attention to better management of the environment. However, these compensations have often turned out as low or that the service is exposed to treatment equivalent to any other natural resource in the market. In practice the hypotheses seem very attractive, encouraging and apparently piloted in various countries though not yet internationally. The outcomes, results or achievements are usually not the same. This is partly because each pilot area is unique and facing different challenges, of influence to the overall performance of incentive-motivated conservation. Use of incentives also faces issues such as justice, equality and equity in the conducted and planned actions (held in the hypotheses),

apparently perceived differently among both implementers and activists for PES. This further complicates the use of PES for the ongoing REDD+ pilots, particularly regarding achievement of distributive justice, encompassing principles of equity, equality and needs satisfaction, or fairness and sustainability in cost-benefit sharing accrued to its implementation.

REDD+ as a set of objectives/activities meant to cause conservation, emissions' reduction and poverty alleviation, also focuses on evaluating its practice based on Effectiveness, Efficiency and Equity (also known as the 3Es) (Vatn & Vedeld, 2012). While the first 2Es look at attaining desired goals in the cheapest and most affordable way, Equity is being focused on co-benefits (Vatn and Vedeld, 2012). This implies focusing actions towards equitable cost and benefit sharing within all stakeholders involved in REDD+. The mechanisms for accounting costs and determining which costs to include or exclude are still underway and very much debatable. Leaving that aside, our focus is drawn to the further burdening task of distributing the benefits accrued from participating in REDD+ activities in a perceived just way, especially to those whose livelihoods may be adversely affected by REDD+ activities. We consider perception of distributive justice as vital for progress of REDD+ in its use of PES schemes. The main factors influencing these perceptions and consequential decisions of the local participants include property/land rights' status, educational levels, compensation (as a reflection of justice) and relational status with leaders or operational officials within REDD+. These factors have often been raised only as influential to the performance of REDD+ and merely as aspects present in the pilots. However, little has been done to link these factors to decisions and preferences often voiced by the local participants. Furthermore, they haven't got enough attention in design process of REDD+ payment schemes, especially in the face of distributive challenges. My use of 3 pilots from 3 different continents and countries involved in REDD+ activities is an attempt to make a cross-case comparison by linking these factors to the preferred payment formats and distributive justice. This knowledge deepens the understanding of why locals make the preferences (choices) they take and how/why attaining distributive justice is a persistent challenge. Lessons drawn from each case are meant to emphasize focus on the factors as possible solutions through which REDD+ design can achieve equity in implementing PES.

However, I insist that lessons here are merely learning grounds and not ultimate solutions for blue print in all pilots. The following implications of the preferred compensation formats for the overall REDD+ architecture and design are assessed basing on case experiences.

The compensations proposed are meant to be incentives for better resource management/conservation, unable to be exact equivalent to all loses and adjustments that the poor have to incur in their involvement. So the main challenge here is for REDD+ to attain its promised triple goal i.e. conservation, emissions' reduction and poverty reduction, in the most just/equitable

way as possible. The questions then remain as to how benefits can possibly be distributed in a just way to all participants? What exactly do the participants see as just or rather what do they prefer as a just compensations?

Some participants may gain more than they deserve (presence of free riders), the benefits may not be enough to totally stop deforestation, the distribution channels may be corrupt or that benefits may be earned less seldom than desired (see Nabanoga et al, 2012). This fear may only become well-established especially if the compensations are made according to size of land under conservation or to only those with clear and recognized property rights. In such scenarios, the rich (with more land to invest in conservation) will earn more and the poor may get swallowed up in the often corrupt and bureaucratic process of titling land (and land use rights acquisition). Tackling the spotlight issues of education, property/land rights, relationship and preferences voiced in pilot areas will provide insights for REDD+ to achieve its goals in a perceived equitable or just way as possible. It is also important to note the fact that participating in REDD+ activities, especially for the poor, implies limited access to forest resources (their livelihood support) and restriction to a new or different land use form to which they may not be accustomed to or cannot afford the opportunity costs involved. More on these differences and challenges are portrayed in the literature review and case studies presented below. Factors influential to choice and achievement of distributive justice are assessed and a comparison of their influence is made across case-pilots or REDD+ in Brazil, Viet Nam and Tanzania. In doing this, I seek to harness an in-depth understanding of these factors and how they could be used as targets for better and more equitable distribution of PES payments proposed under REDD+. The comparison across the cases will display similarities within and differences across the cases, from which REDD+ design of benefit distribution can be based for better context specification. Therefore it entails comparison of influences and perceptions of distributive justice.

1.2 Justification

The POVSUS-REDD+ project works towards, ‘ increase understanding of how different options for REDD+ design and policy at international, national and sub-national level will affect achievement of greenhouse gas emission reduction and co-benefits of sustainable development and poverty reduction’ (Movik et al, 2012). This thesis write up will contribute to the required knowledge of impacts of REDD+ activities in three of the partner countries in POVSUS-REDD+ project. This thesis will particularly show case-based differences in payment formats/mechanisms as preferred by local participants. Emphatically, these preferences are presented as what the locals consider as just and equitable way of compensating their participation in REDD+ activities within their communes. Overly, this will increase the understanding of interactive influences and loop-holes to challenging distributive justice issues faced by REDD+ activities involving use of market instruments such as PES in its pilot areas. The influential factors to achievement of distributive justice are taken as loop-holes and thus possible focal points with which REDD+ architectural planning and designing of co-benefit sharing could be improved towards desired progress.

1.3 The Main Objectives

The main objective of this writing is to document the perceptions of distributive justice, to what extent they differ among the POVSUS-REDD+ pilot areas. It will also casually relate these perceptions to the status of participants’ education, property (tenure/land) rights and relationships with leaders. A challenge in relating this factors to the perceptions offered is that the empirical material used for the write up did not actually have these factors in cooperated in the sought for the preferred payments from the local participants. However, the relation made here will help widen understanding of the reasons given for the choices of preferences given by the local participants.

Along with the preferred payment formats, also considered as what the locals see as a just/equitable distributive mechanism, this study proceeds to attain a second objective of harnessing implications of such status and preferences for REDD+ goals.

To achieve these objectives we ask the question of; what influences REDD+'s achievement of just/equitable distribution of compensations to its local participants, in the pilot areas?

1.4 The Research Questions

In order to achieve our objectives of this study above, the main research question asked was; what are the locals' perceptions of distributional justice and how could these influence REDD+ initiatives? This question encompasses other questions such as:

1. What is the status of the REDD+ pilot areas and how does it influence preferred payment formats?
2. What do the local participants perceive as distributive justice (i.e. reflected as compensation format preferred)?
3. How do these preferences influence REDD+ initiatives?

It is important to note that:

Since responses are likely context specific and thus different, we expect this to make it more cumbersome for the design process for international REDD+ architecture. However, these factors can be used as focal points for REDD+ initiatives to attain the triple goals in a perceptibly just/equitable way.

1.5 Structure of Thesis

Chapter two presents the background, REDD terminology and literature review with which the understanding of distributive justice is drawn and related to REDD+ pursuit for equity/justice in its pro-poor activities. Chapter three then forwards a theoretical framework of distributive justice as embedded in environmental justice debates and highlights key concepts of climate change, marketable ecosystem services and co-benefit sharing, promoted in REDD+ initiatives. In chapter four, methods of thesis writing, criteria of case selection and parameters of analysis are elaborated. Findings inclusive of brief case backgrounds and discussions then follow in chapter five. A comparative discussion of case findings along with their implications or consequences for REDD+ are presented in chapter six. Case specific recommendations are also in cooperated in this chapter. Chapter seven then sums up the whole thesis with a conclusion.

CHAPTER TWO

2 BACKGROUND

2.1 Climate Change

There is an estimate of about 2 degrees Celsius increment in global climatic temperature. This increment is believed to be caused by emission of greenhouse gases (GHG) such as Methane, Carbon dioxide, Sulphur and Nitrogen. This GHG emission is stated to be both naturally and anthropogenically (human) caused (IPCC reports). Anthropogenic GHG emissions are caused by activities such as poor agricultural practices, deforestation, fuel combustion, fires, mining, and forest degradation, among others. The highest GHG emissions are estimated from deforestation and poor agricultural practices (see IPCC, 2000). This claim can be rooted back to the World Bank declaration of deforestation and forest degradation as a global threat to the global climate change that needed an immediate action (Bassett et al, 2000).

“Climate is usually described in terms of the mean and variability of temperature, precipitation and wind over a period of time, ranging from months to millions of years (the classical period is 30 years).” (Le Treut et al, 2007). This climate is constantly under the influence of external factors which occur naturally like volcanoes, and anthropogenic (human-induced) changes in atmospheric composition. Climate change as a phenomenon, involves studies and publication of knowledge regarding planetary changes such as the famous ice-age and now global warming. Calculations and predictions of these changes are still debatable and attracting criticisms from especially pessimists.

2.2 Climate Change and Production

Anthropogenic climate change is gaining attention as significant threat too to biodiversity (Adams & Hutton, 2007). It is believed that climate change mitigation will also reduce poverty and biodiversity loss (Vatn & Vedeld, 2012). In agreement with this possibility, Agder et al (2001) assert that outcomes of physical and environmental processes are strongly linked to the chain relation of deforestation to desertification, biodiversity loss and climate change. Also, actions in relation to reducing deforestation are linked to and will affect the livelihood of millions of people (Vatn & Vedeld, 2012). Global warming, on the other hand, is also expected to continue because it takes a long time to deplete the atmosphere of the greenhouse gases (IPCC, 2007), such as

anthropogenically emitted Carbon dioxide, Methane, among others (Collier et al, 2008).

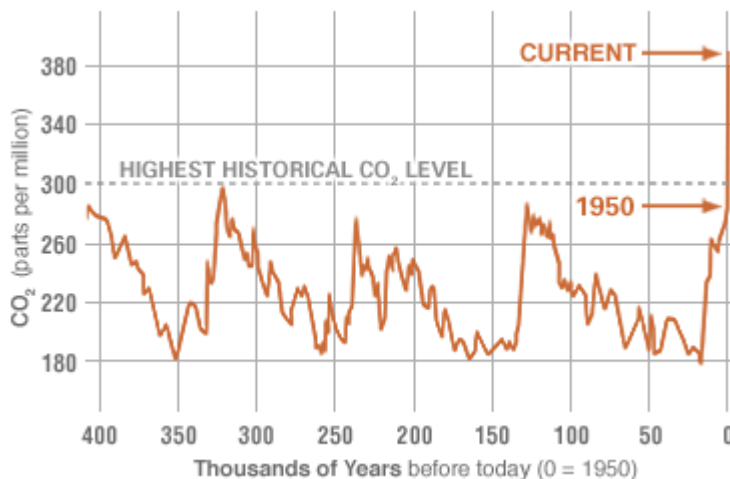


Figure 1: Continued Carbon emissions (extract from NASA.gov)

According to the IPCC the forest sector, by 2007, was accounting for about 17.4 percent emissions of greenhouse gases, worldwide (see Swan and McNally, 2011). This is an equivalent to about 5.8 Gt.s of anthropogenically emitted Carbondioxide per year, also presumed to be entirely from forest land use changes (Miles et al, 2009). By which it implies that any land use could result to sink as well as emit Carbon to the atmosphere. However, the important point to make is the difference is the amount of Carbon emission each land use contributes to the global Carbon stock.

It is noted that land uses involving conversion of forests to grasslands or agriculture and other uses, release significant amounts of Carbon to the atmosphere (see Steffen et al, 2005). Land use changes are estimated to have caused about 1.6 GtC per year in the 1990s (IPCC, 2007). Agricultural prices are noted to have positive correlation to deforestation, implying that increase in agricultural prices would in turn encourage expansion of fields towards forests so as to increase output and earn more income (Combes et al, 2008).

Besides, degrading land uses and deforestation further expose soil carbon to atmospheric loss, reducing soil-carbon stock as well as below ground biodiversity (Gisladdottir & Stocking, 2005:100). Soil is estimated to store more than twice of carbon found in the atmosphere (Eswaran et al, 1993).

On the other hand, forests alone are estimated to store about 247.4 ton/ha of Carbon on tropical forests, similar to that stored in mangrove forests (Alexander et al, 2011). Forest resources are particularly attractive for commercial timber extractions, fuel-wood, charcoal burning, farm expansions and establishment of new settlements. In addition, it is claimed that deforestation is a receipt of illegal logging and poor governance (Vatn & Vedeld, 2012), depict able by bad

relationships and corruption within forest management and dwellers. Bad relationships have embedded mistrust, which potentially prevents achievement of set environmental goals in a particular place (see Muradian et al, 2009). Over time, accumulation of such emissions to the atmosphere has subsequently increased the temperatures (IPCC reports) and the likelihood, intensity or frequency of floods like El Ninos and Tsunamis, droughts, sand storms, among others like tropical cyclones (IPCC, 2007). Heat waves, long droughts and heavy rains will to increase (Huber & Gulledge, 2011) thus reducing agricultural production too.

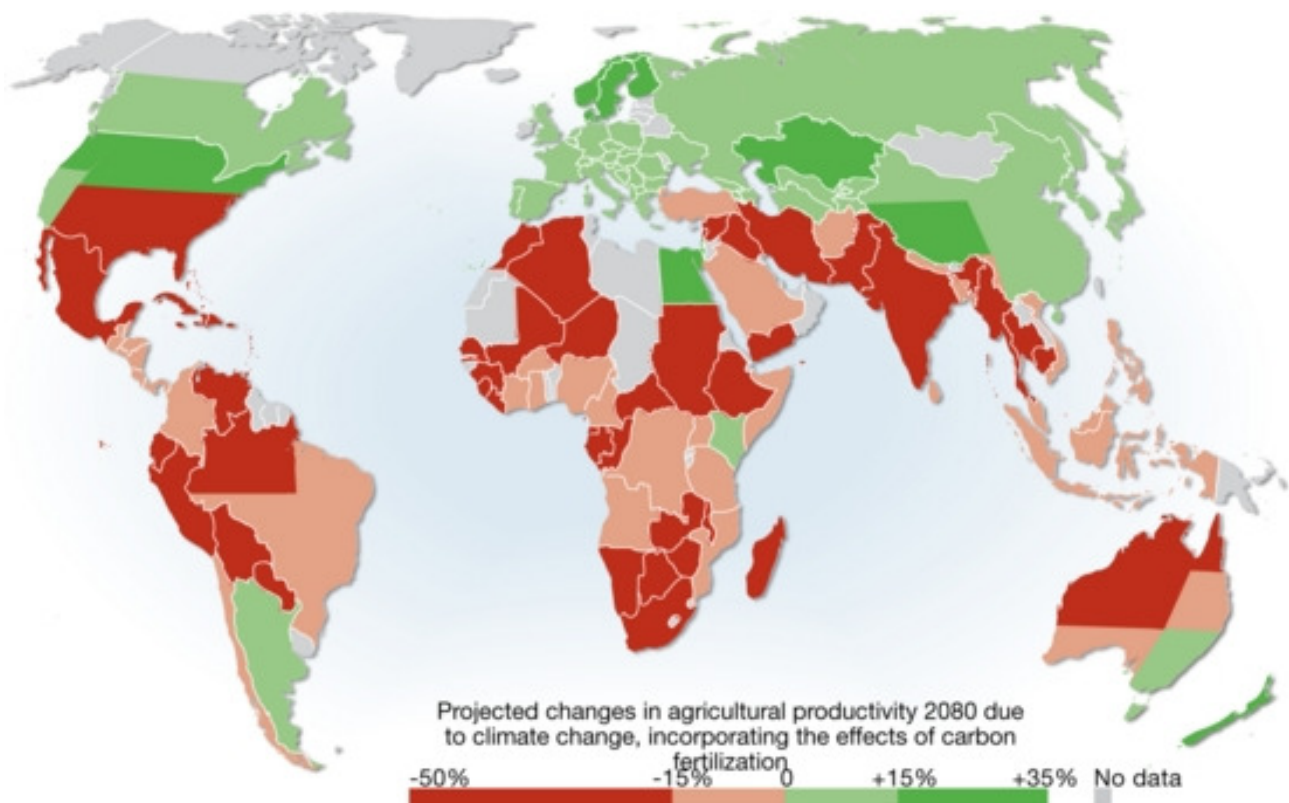


Figure 2: Projected effects of increased climate change on land production (Ahlenius Hugo, UNEP/GRID-Arendal, 2008)

These anthropogenic emissions have also raised the risk of heat waves (IPCC, 2007) and subsequent effects on health and food production (Collier et al, 2008), as well as general productivity of ecosystems and environments on planet earth.

Actions towards abatement of climate change have mainly focused on human induced change partly because knowledge of the natural causes is still minimal and further research is needed. So far, implementation of most climate change related actions are prioritized for developing countries, claimed to be more vulnerable to impacts of climate change due to their high dependence on natural

resources and limited capacity to adapt to change (WRI, 2005).

It is claimed that the quest for forest Carbon as a possibility for increased land grabbing denoted in the rush for highly valued lands in developing countries, 'as conservation competes with other land uses ' such as food production (see Corbera, 2012). In the long run, while this competition may make REDD+ activities more costly. With its uncertainty in demand and fluctuating prices for Carbon credits, REDD+ initiatives may also suffer distrust and dwindling support needed for its legitimization (IUCN, 2009).

The possibility of increasing inequality and exclusion is also viable since disbursement of PES benefits is estranged with conditionality and regulations for finance access and resource use, presenting diverse effects on the livelihood of the poor (see Adams & Hutton, 2007). Often, farmers and pastoralists are noted as perpetual losers in resulting environmental policies (Agder et al, 2001). Therefore, effects of policies under REDD+ may not be exceptional to small farmers and pastoralists. Nkata et al (2012) advocate for market-oriented voluntary benefit sharing schemes, as an alternative resolution for ensuring support from landowners. They suggest that presenting positive economic benefits to ecosystem service providers (i.e. the landowners) may incentivize participation and sustainable management and conservation of the ecosystem.

Besides, knowledge and understanding of climate change and its effects on either ecosystems or livelihoods is not generously shared or equally known to all human nature. Additionally, use of PES is claimed to be characterized by incomplete information of relationships between ecosystems, humans and their activities, and the supply of environmental services (Muradian et al, 2009). This magnifies the challenge on reception of whatever mitigation measure that might be promoted by climate change activists. Raising awareness and capacity building are very necessary for progress towards mitigation of climate change from exploitative use of forests and land.

2.3 Payment for Ecosystem/Environmental Services (PES): Marketing Ecosystem Services

PES is a voluntary, conditional agreement that involves in the least one buyer and one seller of a particular environmental service or land use meant to produce a required service, a more direct way to promote conservation (Wunder, 2007). It is notably a concept at the center of majority current conservation practices and concerns. Use of PES schemes involves challenges ranging from demand size and know-how to implement agreed conditions by the suppliers of the service; with conditions such as credible baseline records, compensation modalities, conservation opportunity costs, clients with credible land claims and threat to conservation (Wunder, 2007). Determinants for receiving PES include; security of land tenure, legality of resource use, and value addition to resource in question (with consideration of opportunity costs incurred) (Wunder, 2007). Other considerations taken involve agent-specific pressure, negotiation power and political feasibility of the volunteering participant. However, PES schemes present prospects of additionally in respect to baseline records of deforestation, livelihood improvement and fairness in benefit sharing (Wunder, 2007).

PES is made operational based on the notion that the Ecosystem and its services can be commodified. This has been affirmed by ongoing efforts to monetize the value of various ecosystem services, later to be sold at a competitive market price. Market mechanisms are claimed to be dependent on adequate information, clear property rights, clarity of duties and strong institutional capacity (Lockie, 2011). Apparently, these aspects are all inadequate in REDD+ pilot areas, proposed for PES schemes (a market instrument or mechanism).

The services involved range from clean air, clean water, to productive land and waters (i.e. aquatic life sustainability and management), among others (WRI, 2005). There is a notion that the value of all these services can be converted to streams of revenue (Adams & Hutton, 2007) and thus divisible, if only they can be valued at market price or prized in some way. Well, pricing may risk undervaluing of some ecosystem services, just because they are not marketable, thus being bundled up with other marketed services (Bryan, 2012). It is further noted that just a few ecosystem services potentially have economic value, which is also influenced by carbon prices in the emissions' markets (Corbera, 2012). There is also fear that this itemizing of nature may shift conservation logic from protection for all living organisms in an ecosystem to protecting only those providing services for human use (Corbera, 2012). Implying that REDD+ and use of PES schemes are performed

based on monetary values and utilitarian principles of demand and supply, according to Corbera (2012).

Use of market instruments such as PES schemes evidence marketability of ecosystem services. These schemes are expressly used as incentives for conservation and reduction of Carbon emissions from deforestation and forest degradation (termed as REDD+). Market instruments are also thought to enable sharing of benefits, meant to improve livelihoods or rather alleviate poverty, due to their divisibility (Lockie, 2011). This implies that market instruments such as PES are expected to be the most efficient and effective plus equitable in ensuring resource allocation or distribution to all stakeholders (Lockie, 2011).

PES schemes are also operated in an assumption that the services provider and beneficiary are perpetually in a good-functioning interaction, negotiating prices and conditions of operation. Yet the governance of these ecosystem resources and services is highly procedural and bureaucratic. There is almost no direct contact between the market and the locals. Rather, this role is always played by intermediaries such as non-government organizations (NGOs) and individual buyer groups or states.

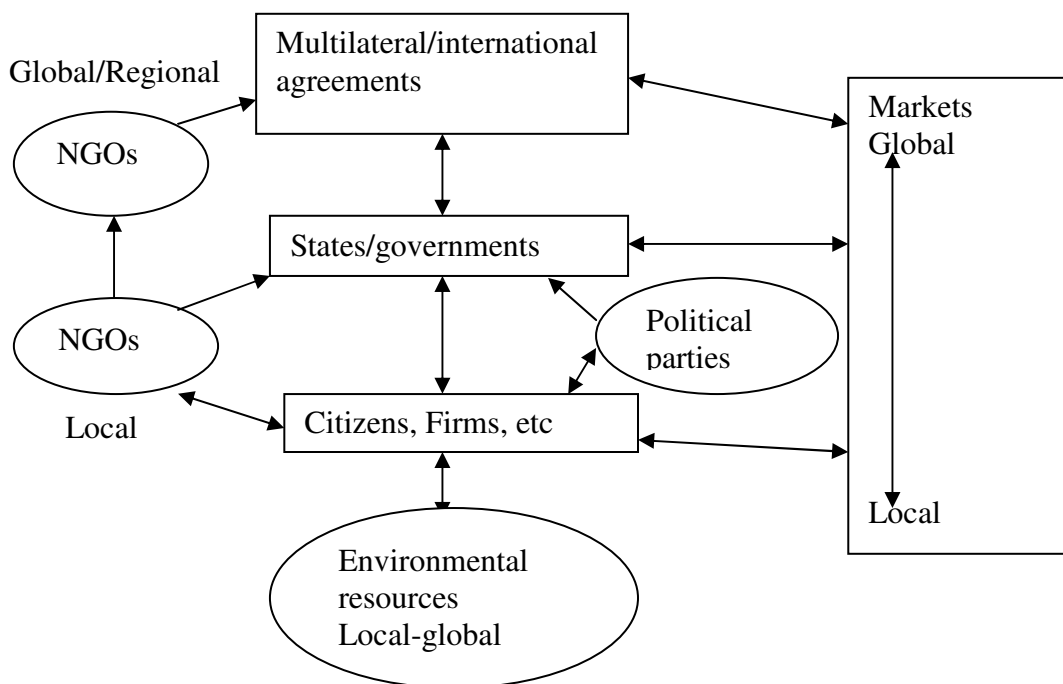


Figure 3: The supposed flow of communication and interactions in Resource governance (Adopted from lecture by Kulindwa, 2013)

Similarly, these groupings represent various buyers and sellers involved in the business of ecosystem services. The markets are also presumed to be functional and open (or accessible) to all who are willing to invest in the traded ecosystem services.

Both as a means and an end in itself, marketing and pricing of ecosystem services are believed to incentivize investment in sustainable management and use of the ecosystems, since these services accrued are vital to humanity. Implying that the, 'properly functioning markets will... account for protection and regeneration of those natural resources on which it depends' (Lockie, 2011).

Along with Vatn & Vedeld (2012), I agree that basing on market oriented or based instruments and conservation approaches may not yield desirable or durable behavioral change in participants. Basing on market instruments may just produce another sort of 'forced trade' (Muradian et al, 2009) in which the poor take whatever price they get for the services they sell, just because their conditions limit them from retaliating or voicing dissatisfaction. Even more, payments may reduce satisfaction in task involvement or participation of locals as was noted within Tanzanian participants (Corbera, 2012). Other issues such as illegal logging and poor governance (often involving corruption too) may not also be efficiently handled by market-based mechanisms, but might rather

encourage elite capture of service in question, in this case forests (Vatn & Vedeld, 2012: 425-426). In such cases too, the poor suffer most as they become victims of bride-demanding bureaucratic processes and corrupt officials (see WRI, 2005).

Valuing of some ecosystems over others may also cause trade-offs with other services and create negative impacts on local wellbeing and functionality of the other undervalued ecosystem service providers (see Corbera 2012). Also, it has been predicted that these market instruments such as PES schemes often have low payments (Wertz-Kanounnikoff et al, 2011) and may cause no pay - no care attitude in participants (Corbera, 2012).

Also PES schemes may incentivize lay off of workers especially those formerly working for logging companies, and may increase income inequalities by paying only landholders (excluding the landless) and further cripples participants that develop fund-dependence (Greiner, 2012). Therefore PES schemes aimed as incentives for motivation participation may cause both intended and unintended (both positive and negative) changes (Bryan, 2012) in social behavior, ecological and institutional performances, thus not perfect on ground implementation (Muradian et al, 2009). PES may also face political influence from often inequitable local level institutions, thus encouraging inequalities in income and resource access and other uneven distributional outcomes or distributional injustice (see Corbera, 2012). Muradian et al (2009) stated that equity concerns are particularly salient in environmental practitioners in the developing countries like those in which REDD+ and PES are implemented.

Besides, Greiner & Stanley (2011) assert that PES schemes can be socially efficient and environmentally effective if implemented in absence of opportunity costs differentials and absence of extremely disadvantage people (i.e. the poor and marginalize populations apparently targeted by REDD+ pro-poor interventions). For instance, weak linkages and bad relationships between government agencies and local participants, along with unclear landholding rights, magnify PES challenges (Petheram & Campbell, 2010).

Encouraging enough, Corbera (2012) asserts that perpetuated use of PES may be the only, though uncertain, way for a sustainable conservation behavior in the long run. Lemos & Agrawal (2006), on the other hand, emphasize for environmental governance necessary to yield long term sustainability and concerns for nature, not just short term progress based incentives for environmental efficiency and equity.

2.4 Roots of the REDD+ Tree

The United Nations Food and Agriculture Organization (UN FAO) estimates global forest loss at an average of about 14.5 million hectares per year, only between 1990 and 2005; with the highest deforestation being in the tropics (a location with almost half the world's forest cover) (FAO, 2013). This only affirmed the human prints in accelerating climate change, already noted in all IPCC reports on climate change and human impacts.

With deforestation estimated to induce 18% GHGs, equivalent of about 5.8 billion tonnes of CO₂ (released to the atmosphere) REDD was birthed as an international framework to put an end to these emissions (Holloway & Giandomenico, 2009). Additionally, this framework is expected to also help alleviate poverty whilst conserving biodiversity and sustaining vital ecosystem services (Holloway & Giandomenico, 2009).

The characterization of some ecosystem services as vital refers to focus on those services that are believed to have a more direct influence on livelihoods and conservation objectives. The first of its kind (i.e. a REDD type project) was initiated in 1997 as the Noel Kempff Mercado Climate action Project and the Kyoto Protocol (see Holloway & Giandomenico, 2009). The following meetings like the Montreal (COP 11) in 2005 and the Bali Action Plan (COP 13) in 2007 further strengthened the REDD framework. Besides resistance, criticisms and boycotts from other states (non-signatories to the agreements), the COP 15 in Copenhagen in 2009 brought REDD into action (see Holloway & Giandomenico, 2009). Since the REDD policy notably has a significant impact on conservation objectives, the policy has got an added plus to it i.e. REDD+ to imply to reducing emissions from deforestation and forest degradation plus conservation. However, it is notable that the definition of REDD, in itself, has various angles of understanding. For instance it could also encompass sustainable management of forests and enhancement of forest carbon stocks, only forestry or inclusive of all land uses and related changes on land (see Holloway & Giandomenico, 2009). REDD+ interventions are already becoming famous due to their win-win promises of contributing to climate mitigation, biodiversity conservation and poverty alleviation, although the win-win promise is persistently debated (Phelps et al, 2011). For instance, Potts et al (2013) assert that Biodiversity and Carbon enhancement are two different approaches needing individual attention, a far fetch achievement under REDD+. Also, there is continued caution on REDD+ activities especially based on experience with past conservation practices that exacerbated poverty and forced relocation (under command-and-control) in some areas (see Phelps et al, 2011), though with progress in yet other places. REDD+ is also influenced by who pay for the emission's reduction and the institutional framework benchmarking the Carbon price (Corbera, 2012).

The possibility of increasing inequality and exclusion is also viable since disbursement of PES benefits is estranged with conditionality and regulations for finance access and resource use, presenting diverse effects on the livelihood of the poor (see Adams & Hutton, 2007). Often, farmers and pastoralists are noted as perpetual losers in resulting environmental policies (Agder et al, 2001). Therefore, effects of policies under REDD+ may not be exceptional to small farmers and pastoralists.

Besides, knowledge and understanding of climate change and its effects on either ecosystems or livelihoods is not generously shared or equally known to all human nature. Additionally, use of PES is claimed to be characterized by incomplete information of relationships between ecosystems, humans and their activities, and the supply of environmental services (Muradian et al, 2009). This magnifies the challenge on reception of whatever mitigation measure that might be promoted by climate change activists. Raising awareness and capacity building are very necessary for progress towards mitigation of climate change from exploitive uses of the forest and land resources.

2.5 PES for REDD+: Co-benefit Sharing

PES is used basing on the possibility that compensations may yield incentives sufficient to encourage and build local participation towards reducing emissions from deforestation and forest degradation (Combes et al, 2008). Also, more credibility will be earned to REDD+ when compensations (carbon finance) are linked to real efforts towards reduced deforestation or forest degradation (Combes et al, 2008), implying use of desert compensations (Armstrong, 2012). Compensations are also seen as bridge to conflicting interests between suppliers and demanders of ecosystem services (Wunder, 2007). However, PES has been an instrumental mechanism used in carbon related projects such as:

- Plan Vivo in Carbon Voluntary markets,
- Clean Development Mechanisms (CDMs) in Regulated carbon markets and
- REDD+ in the Evolving carbon markets.

Regarding REDD+ Evolving carbon markets, countries are provided with guidelines to inexpensively abate climate change through forest conservation locally, regionally and internationally too. Blackman states it that selling carbon credits may be a better option to fuel switch, carbon capture and storage than other abatement measures available (Blackman, 2010). However, he does criticize the simplicity applied in calculating transaction cost of the proposed payments and opportunity costs incurred by the participants in reducing or preventing deforestation.

Generally, forest Carbon stocks are measured based on either forest area cover or Carbon per hectare of forest, also termed as forest density (Angelsen & Wertz-Kanounnikoff, n.d.). Instead, he insists on a watch for additionality and leakages, seemingly big challenges to REDD initiatives as well as REDD+ efforts (Blackman, 2010).

Whilst the clean development mechanisms (CDM) pilot projects and make compensations based on funds from Community Development Carbon Fund, REDD+ forwards to use open market sale of these Carbon credits. Whatever much is made from such sale is what will be distributed under PES schemes to the participants of REDD+. However, the prices at which these credits are sold have not been stable over time.

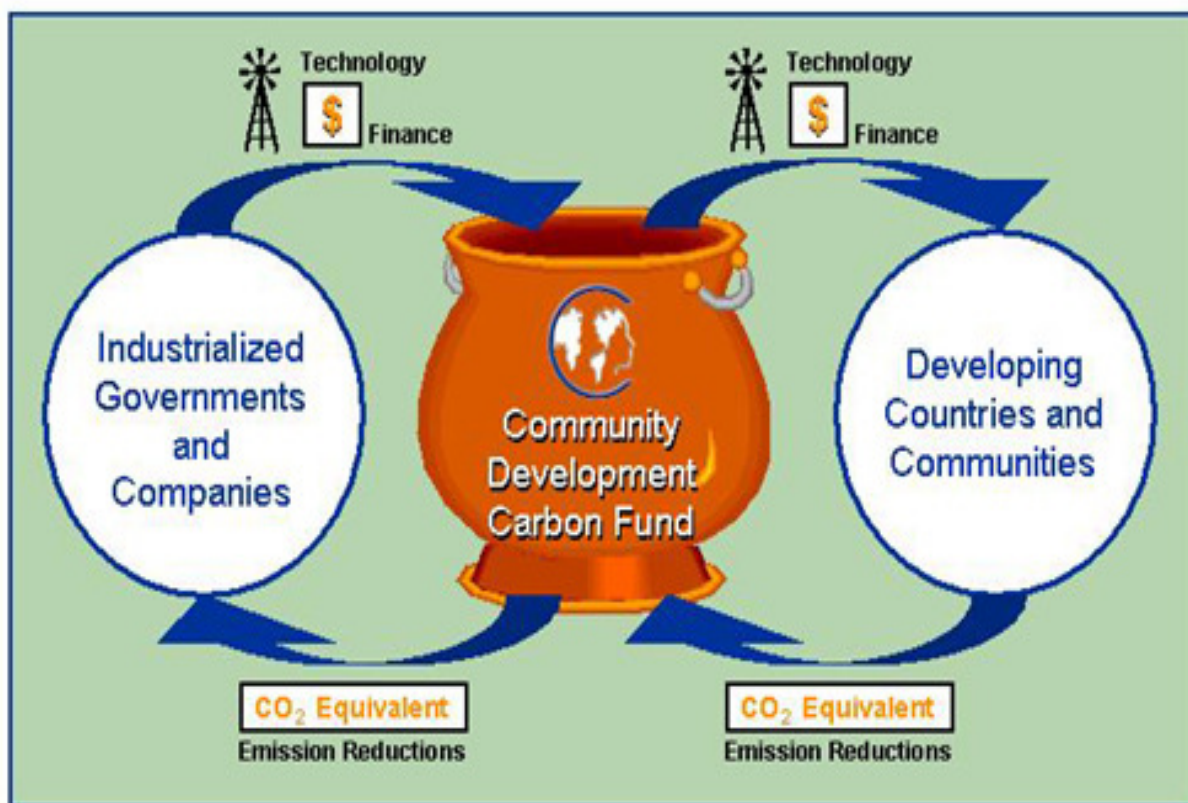


Figure 4: Source of funds in CDM pilots (Aune & Grimsby, 2011)

Besides, the money accrued from this sale is claimed to be insufficient for all participants in REDD+ activities, especially the local-poor in the environs it is exercised. Predictions, based on various calculations, show that prices of carbon credits are and will continue to decrease over time as shown in the graphs below.

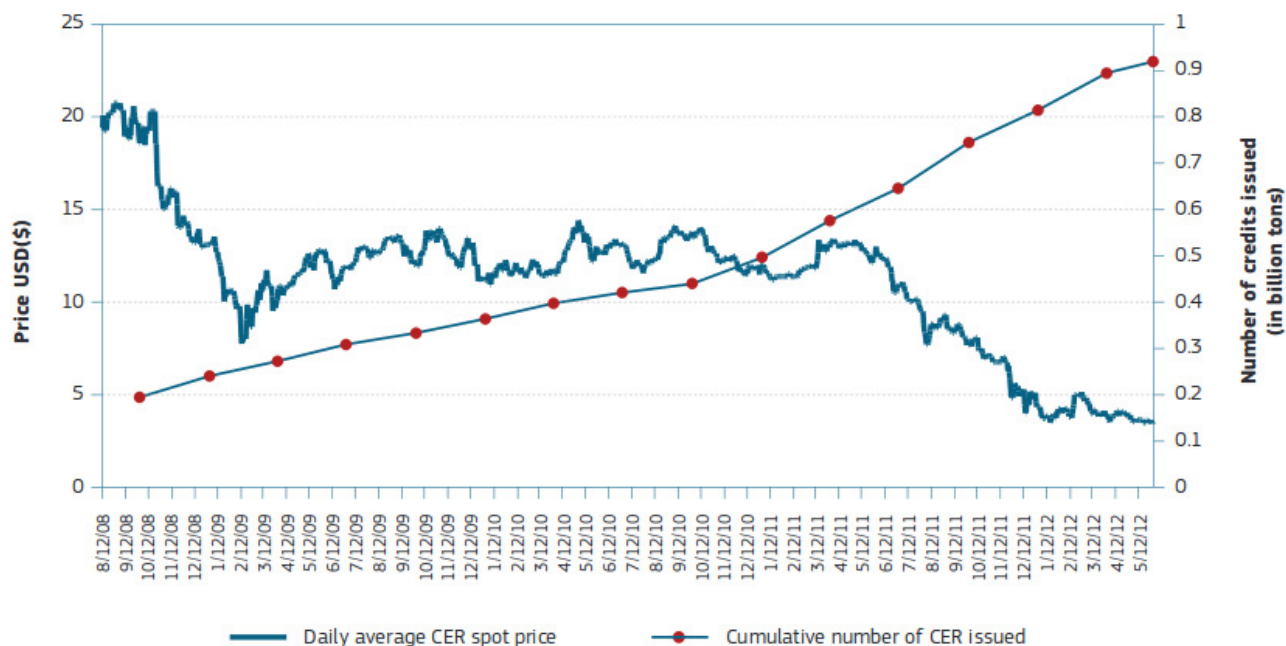


Figure 5: Fluctuating price of Carbon Credits (extract from CDM Policy Dialogue, 2012)

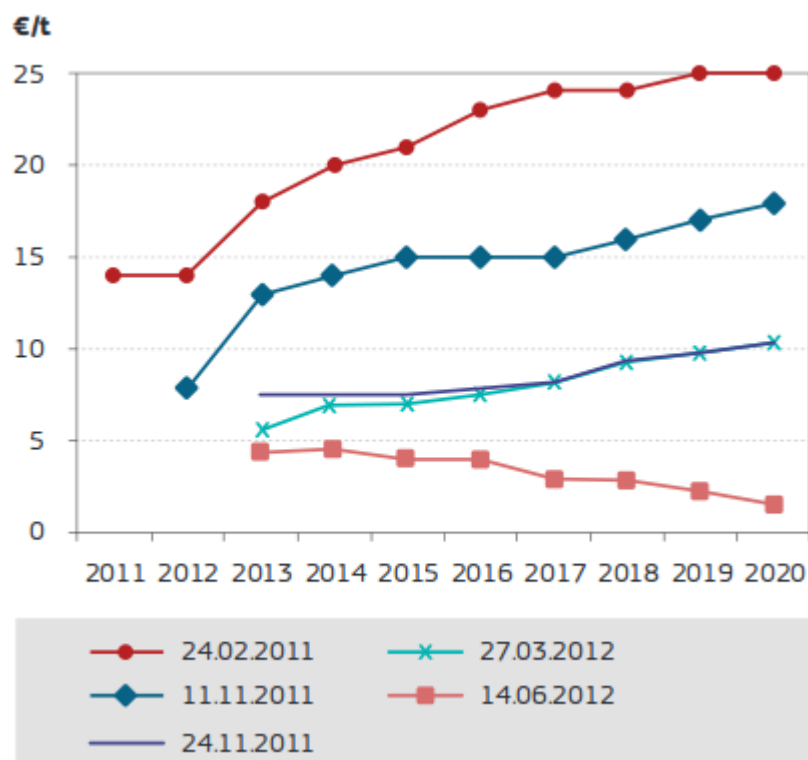


Figure 6: Projections for future Carbon Credit prices (extract from CDM Policy Dialogue, 2012)

Distribution of the benefits from REDD+ activities, given that credit prices are dwindling (as shown above), is thus problematic. Further ensuring that they don't increase poverty and income inequality levels is a preceeding challenge for REDD+ activists.

"PES programs are often touted as tools for poverty alleviation...evidence indicates that the benefits are small and it is often not the poorest members of the communities who will benefit."

(Mwayafu & Peskett, 2009).

Co-benefits are all positive benefits that could be attained from ecosystems' management and sustainable use (Bryan, 2012). The issue of co-benefits was internationally raised, along with recognition of the possibility to conserve, sustainably manage and enhance forests and their carbon stocks, at the Bali Action Plan of the United Nations Framework Convention for Climate Change (UNFCCC) (Swan & McNally, 2011). This meant that REDD+ activities, transformed or evolved from REDD (Swan & McNally, 2011), had the potential of promoting conservation whilst meeting the needs and compensating the (often poor) local and indigenous communities involved in the implementation of its objectives (Brown et al, 2008). And as Mwayafu & Peskett (2009) assert, it is not always easy to get benefits to reach the poorest participants in conservation activities. To date, REDD+ pro-poor activities are in cooperating the interest of the poor at heart of its planning and implementation, meant to cause 'no harm' and cause poverty alleviation alongside promotion of conservation (see Vatn & Vedeld, 2012). To ensure no harm, the 16th International Climate Conference emphasized the vitality of full participation and engagement of local and indigenous communities in REDD+ activities (Huettner, 2011).

With that in mind, delivery of co-benefits will determine the extent of progress and success of REDD+ approaches especially in using PES schemes and being pro-poor. The challenge may be that access to these benefits always comes with subjection to eligibility and compliance with a range of regulations regarding the protected area/park (Adams & Hutton, 2007) or conserved forest in the case of REDD+. Failure to meet eligibility or compliance standards causes exclusion of many stakeholders and actors like the poor- unlicensed residents or landholders close to the natural resource set for conservation and compensations. Often only a few politically connected elites may then be able to access such compensations. In such cases, resource wealth is bound to diversion from public good of the poor through corruption, elite capture, mismanagement and political patronage, especially in least democratic poor regions of the world (WRI, 2005; also Mwayafu & Peskett, 2009).

Corruption is noted to be embedded in most of the operating systems' administration in forestry (see WRI, 2005). This might cause only those governments willing to perform administrative reforms,

combatting corruption and reducing bureaucracy (Vatn & Vedeld, 2012), to optimally achieve rightful and transparent distribution of such benefits. These governments should also be capable of integrating environment and governance such as promoting good ecosystem stewardship in local participants (WRI, 2005).

Another challenge to the poor's access of natural resource benefits is the requirement for secure and recognized tenure rights, marked as very essential for legal commerce of environmental services (see WRI, 2005). It is also noted that the satisfaction of forest-dependent communities, participating in REDD+ activities, is one of the most important means by which REDD aims to achieve its desired legitimacy and effectiveness (Brown et al, 2008) as well as achieve required participation for desired conservation and emissions reduction. However, there is persistent fear that these activities may just intensify or reproduce existing inequalities and social exclusion especially in developing countries exercising PES (Corbera, 2012).

On the other hand, I concur with all assertions that ecosystem services provide benefits that are very important to livelihoods of all humanity and nature flourishing. For instance, forests and woodlands support about 87% of livelihoods of the rural poor in Tanzania alone (Miles et al, 2009). This dependence on environmental resources does not seem to be reducing, especially within the rural poor whose livelihoods depend on natural resources (see WRI, 2005). However, these services and benefits have become global pool resources and benefits, available for equitable sharing with the entire human race as the global stakeholders and beneficiaries. With marking as common (global) pool resource, these resources' use and access are to be controlled and restricted, or else they will be over exploited (WRI, 2005). Much as the practice is always the opposite, that the richer, politically strong and other connected elites have more authoritative voice in the use, distribution and management of these 'global resources', we are meant to believe that all humanity is entitled, in some way, to these resources. Affirming this claim, the World Resources Institute (WRI) asserts that the richer in society have greater ability to exploit ecosystems thus benefiting more than the poorer (WRI, 2005:41-44). Also, depending on the tools of measurement, 'larger land owners, who account for the currently largest deforestation rates, would tend to reap more benefits' (Muradian et al, 2009). This is possible, especially, if payments are measured according to size of land under conservation.

Benefits can be considered as entitlements and rights while burdens can be taken as duties and responsibilities or costs that are split among actors either at global or regional level. For global distributive justice in cost-benefit sharing, the resource in question should also be globally available (Freeman (2006) in Armstrong, 2012:22). Apparently, Nkata et al (2012) have noted that benefits

from ecosystem services in developing countries are considered as common property, liable to equitable global benefit sharing (cited Wallace, 2007). This has thus posed developing countries with challenging responsibility of developing and implementing fair and equitable benefit sharing policies. Miller (2009), in response to climate change and emissions' reduction, insisted that poverty is a problem enough for the poor. He stated that they should not take responsibility of reducing GHG emissions. Instead, they should increase emissions so as to reduce poverty (Armstrong, 2012:197). In this, he identifies societal differences in capacity to reduce emissions, which REDD+ interventions should importantly consider when implementing defined activities. In other words, this implies that the polluters, from the highly industrialized nations, should bear the full costs of emissions' reduction and that the promoted principle of 'equal sacrifice' should only be used for widespread mitigation of climate change (Armstrong, 2012:199). This also endorses demand for polluter-pays approach to climate change and asserts that the responsibilities to mitigate it can't be equally shared. It is evident that many polluters (developed and industrialized countries) are willing and have devoted to paying for emissions' reductions, more as a duty and not a punishment for polluting (see IUCN, 2009).

The challenge for REDD+ then remains as to ensure delivery of justice to all its participants at; lowest costs, high compliance, achieved conservation and poverty alleviation (being pro-poor). Specifically, it faces the challenge of how to pay, how much will be enough as compensation desirable to all participants, in what frequencies or which levels or channels of distribution to use. Besides this, negotiations related to Carbon stock calculations and pricing affect the progress of compensation mechanisms that will be developed, thus affecting the Carbon credit awarding mechanisms (Combes et al, 2008) and reception. Additionally, political pressures engaged these negotiations may inflate objectives set (Combes et al, 2008).

On the other hand, globalizing these benefits transforms governance and distribution to common pool resources-like governance mechanisms (Nkata et al, 2012). Adoption from Ostrom (1999& 2005) forward that the benefit sharing in such a common pool resource will be hierarchical, market oriented and externally influences since stakeholders are global (Nkata et al, 2012). Since these stakeholders have different perceptions of fairness and justice (IUCN, 2009), there is then need to draw more attention to and consideration of the differences that may be existent within these stakeholders. This will help in developing a well-informed and comprehensive mechanism of benefit sharing. The roles and responsibilities of each stakeholder also need clarification (Tropenbos International, 2005:40). Furthermore, managerial and transactional costs incurred in respect to the actions taken should be well laid-out for a more fair and just allocation of accrued benefits or

compensations to be made.

Although monetizing these benefits is asserted as the easier way to equitably distribute the benefits from ecosystem services (IUCN, 2009), the WRI emphasize that to ascertain equitable gain from ecosystems means managing them for increased productivity (WRI, 2005:44). The co-benefit delivery across practitioners of conservation is thus expected to vary (Miles et al, 2009). The cross-scale comparative discussion held below will show potential reasons for this predicted difference in benefits accrued to local participants in REDD+ interventions.

Keeping in mind that REDD+ is highlighted in an economically attractive manner (Huettner, 2011), the costs involved have shifted (across scale and time) from polluter pay to beneficiary pays in its use of PES schemes (Greiner, 2012). Therefore, this increases the risk of transferring transaction costs from intermediaries to landholders and managers (the service providers) who unfortunately have high benefit expectations from their participation.

It is also important to note that participants often think of self-efficacy and also like to evaluate benefits of their involvement (Petheram & Campbell, 2010). This implies that if expected benefits are high but actual gains may be low (partly influenced by persistent corruption and distrust in official diligence), participation may reduce and withdrawal from the project may be consequential. Adams & Hutton (2007) and Vatn & Vedeld (2012) show vitality of functional institutions for PES funding to reach rightful service providers involved in conservation activities, though is apparently experimented in existing (often) command and control mechanisms and institutions (McElwee, 2011). Bryan (2012) exemplifies that expectations for profits from carbon markets may encourage land-use change like shift from food production to tree cover plantations, a market-based instrument incentive-motivated change. Nkata et al (2012) forward market-oriented voluntary benefits sharing schemes as alternative resolution to ensure support from landowners. They suggest that presenting positive economic benefits to ecosystem service providers (i.e. landowner) may incentivize participation and sustainable management and conservation of the ecosystem.

Therefore, it is important to address these expectations with clearly quantified and realistic costs and benefits of implementing REDD+. This can be a possible future research topic. This will assist local participants to make better informed decisions of what or where to invest given the future benefits estimated from their involvement. It is also important to note that sharing/ distribution of these benefits, in an equitable /perceived just way is still a challenge though with possible solutions as presented from cases elaborated in the following pages.

Brown et al (2008) cautions that the 'trade-offs among effectiveness, efficiency and equity must be taken into account', else, emphasis on co-benefits might turn out to be de-motivational. Muradian et

al (2009) also assert that notions of fairness often determine the feasibility of a scheme such as PES, thus vital to understand the theories/framework of distributive justice.

In the following pages we mainly address equity/justice related issues whilst emphasizing that climate change and co-benefits can concurrently be achieved if only the issues of education, property/tenure rights, leadership-relations (aspect of governance) and preferences compensation formats are settled at local-participant level. The influence of these factors to the achievement of distributional justice/ equity is further elaborated using findings from Tanzania, Brazil and Viet Nam REDD+ pilots.

2.6 Role Players & Participation

Climate change is real and its effects are expected to be more adverse to African region than others (Collier et al, 2008), though also generally severe towards the world's poor, with inadequate adaptation and coping strategies (IPCC, 2000). This then necessitated the prioritization of the poor's involvement or participation in climate related interventions.

Participation may be criticized as a coercive (Agder et al, 2001) resource management style though it earns lasting behavioral change than can be asserted by for instance strict rules or incentives.

Whilst much focus is on the poor's participation in environmental protection, such involvement may only disproportionately burden the poor over the richer polluters or deforesters who may be heavily degrading the resources we so value and need to protect, declares Muradian et al (2009).

Furthermore, impacts of the poor small-land holders on climate change and deforestation may be detrimental but also small in scale as compared to impacts from large scale land holders (Muradian et al, 2009).

Apparently, REDD+ is undertaking a multi country project with the name POVSUS-REDD+. The name POVSUS –REDD'+ stands for, 'Poverty and sustainable development impacts of REDD architecture; options for equity, growth and environment,' (Movik et al, 2012). Participants in this multi country REDD+ Partnership include Fundacao Amazonas Sustentavel (FAS) in Brazil, Civic Response in Ghana, SNV in Viet Nam, Sokoine University of Agriculture, Faculty of Forestry and Nature Conservation in Tanzania, and Makerere University, Faculty of Forestry and Nature Conservation in Uganda (Nabanoga et al, 2010). This partnership works to examine the impacts of REDD projects, how best REDD policies can be best implemented and assess alternative compensations to the affected communities (Nabanoga et al, 2010). They also conduct research in

all the partner countries. This partnership is led by the International Institute of environment and Development (IIED) in UK and the University of Life Sciences, Aas-Norway, and is funded by various organizations in developed countries e.g. the Norwegian Government's Climate and forest Initiative known as the Norwegian Agency for Development Cooperation (NORAD) (Nabanoga et al, 2010). This partnership was launched in Oslo in 2010 (Nangendo et al, 2011). Notably, this partnership is of five countries namely Brazil, Viet Nam, Ghana, Tanzania and Uganda.

Concurrently, the Intergovernmental Panel on Climate Change (IPCC) has been very active in climate change related publications and has influenced changes in political, economic and social structures at all levels of resource governance. The IPCC has also played an important role in the birth of REDD+ especially as a means to reduce emissions of greenhouse gases that are not only polluting but also accelerating global warming.

Generally speaking, climate change and its impacts on human livelihoods and biodiversity have got attention from both national and global spheres of resource governance. A majority of the advocated and implemented activities are focusing on governance and management in the energy, agriculture and forestry sectors since the environmental services to be traded fall in the jurisdiction of these sectors.

The actors and stakeholders involved in and influential to this governance include sovereign states, state partnerships (and/political actors), non-governmental organizations, civil society associations and collaborations at local, national and global levels. In the Conceptual model of REDD-PES, the identified actors are stated as the buyers and sellers/providers of the environmental service in question. At national level, the buyers are identified as governments and subnational entities (Angelsen, 2008). At national level, national governments and intermediaries are stated as the buyers who are also responsible for delivery of payments to the service sellers at local level i.e. local landowners (Angelsen, 2008). The designated national authority (DNA) is the instrumental body in-charge of approving all transactions above and below it, thus the active intermediary in all REDD 'business' i.e. an important bond between the environmental services buyers and sellers in REDD.

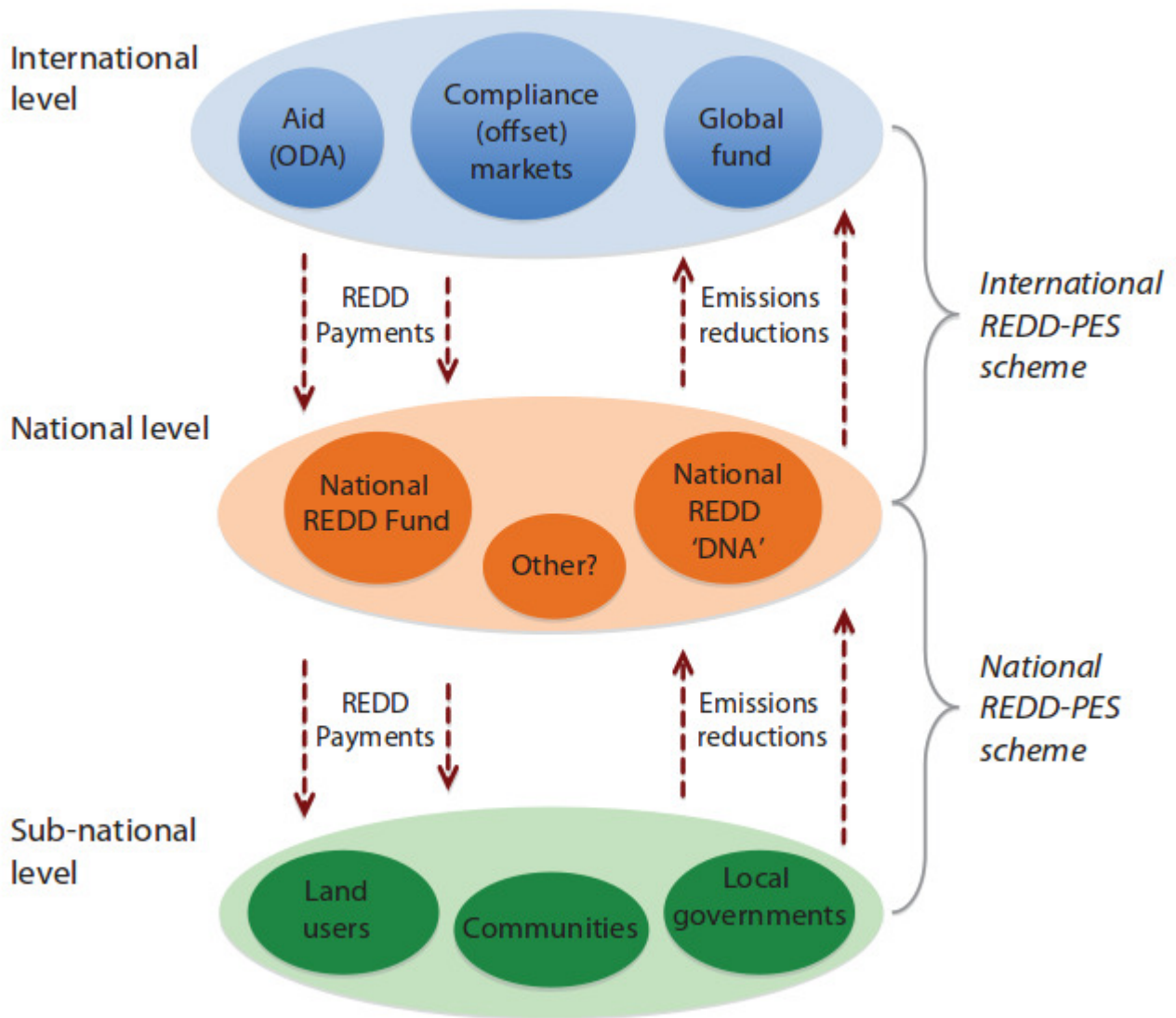


Figure 7: Actors in REDD: Conceptual Model of a multi-level REDD Payment for Environmental Services' (PES) schemes (extract from Angelsen, 2008)

Among them is the Intergovernmental Panel on Climate Change (IPCC) working groups, devoted to scientific, technical and social-economic research in relation to climate change and its impacts. The interactions of these actors are also enormous since policies are often made and debated at global level yet measurement, reporting and verifications of implementations and progress are made at local level. This is so, partly, as an impact of intermediaries who could be NGOs or researchers or individual groups with invested interests in the resource in question, in this case forestry and climate change phenomenon.

Besides, even the climate system is '*a complex, interactive system consisting of the atmosphere, land surface, snow and ice, oceans and other bodies of water, and living things.*' (Le Treut et al, 2007). Therefore, understanding of the feedbacks and interactions leading to climate change would equally need joint effort and communication (interaction) within all concerned and interested activists.

Not only are these interactions helpful in increasing the understanding of climate change and global warming, they could magnify challenges of attaining creditability, legalization and integrity in mitigation and abatement operational activities. For instance, with involvement of many actors, sharing of accrued benefits may turn out dwindling as it descends down from global to local participants. Attaining satisfaction and equity/justice and fairness becomes even more cumbersome. The processes of co-ordination, monitoring and evaluation of actions of all actors become even more ambiguous. Predominant corruption and political interference magnify the task to achieve distributive justice. Furthermore, perceptions on what entails an equitable/just pay vary within all levels of resource governance.

The cases below show that various groups of people prefer different kinds of payment formats. This has been discussed here as relational to low education, poor/bad relationships with leaders and unclear property rights' holding within local participants. Thereafter, implications of these preferences to REDD+ have been discussed. It would be interesting to know what is preferred as a just distribution at global level and whether aspects of education, tenure and relationship status affected or influenced choices made. Besides, definitions of justice, equity and fairness have varied and have no universal coherence as will be portrayed in the literature reviewed below. However, this thesis will derived one understanding from this literature, upon which the rest of the discussions and forwards will be based. As we go further, it is important to take note of some terminologies often used in relation to REDD+ interventions, as written below.

REDD Terminology

There are various terminologies used in REDD activities. However, the most relevant and often used are these defined below as sourced from Angelsen (2008). These terms are also used in this write up, thus knowledge of their meanings is important for understanding their usage here.

Additionality: this refers to projects that demonstrate, "real, measurable and long-term benefits in reducing or preventing carbon emissions that would not have occurred without the project. In reference to crediting systems, additionality would imply to payments for reducing emissions to a level below the business-as-usual (BAU) scenario."

Transaction costs: these are costs that are, 'involved in successfully connecting the carbon buyers and the carbon sellers.'

Leakages: In reference to climate change and Carbon emissions, "Carbon leakage is the result of interventions to reduce emissions in one geographical area (sub-national or national) that lead to an increase in emissions in another area." (Angelsen, 2008). Also leakage 'of carbon benefits is when emissions increases outside of a project boundary due to project activities e.g. If you stop an activity in one area, it just increases the activity in another area.' (Holloway & Giandomenico, 2009). Another example could be when protection of one forest against deforestation leads to forest conversion (or deforestation) in the unprotected forest.

Permanence: This refers to, "the duration and non-reversibility of a reduction in GHG emissions. Non-permanence can be seen as form of inter-temporal leakage." (Ibid, extracted from Dyngeland & Eriksson, 2011).

Opportunity costs: "Opportunity costs are the forgone economic benefits from the best alternative (non-forest) land uses, e.g. the minimum amount a landowner must be paid to be willing to stop deforestation and forest degradation " (Angelsen, 2008) i.e. expressed as compensation payment.

Reference Level/benchmark: this may refer to;

- Historical baseline rate of deforestation and forest degradation, and the resulting CO₂ emissions over the past x years;
- The projected deforestation and forest degradation under BAU scenario where the baseline is the benchmark for judging the impacts of REDD measures and ensuring additionality;
- The crediting baseline or reference level/benchmark for rewarding the country (or project) if emissions are below that level.

Additionally, I embrace the definition of ecosystems services provided by the Millennium Environmental Assessment (MEA) reports as all the multiple benefits that people receive from nature, ranging from air purification, food, shelter, medicine, wetlands' flood control ability and forest mitigation of climate change, among others (MEA, 2005).

2.7 Global Justice Issues

Drawing from various experiences with payment and compensation schemes, it is notable that equitable/just benefit sharing comes head-on with questions of who should be paid, how much is enough, duration of the pay, what is preferable and viable to available resources, and many others. It is true that some initiatives can be established with predetermined mechanisms or forms of payment or reward to participants. However, not all stakeholders may ethically agree that it is right to decide what payment format to offer, on behalf of local participants. Instead, they seek participant preferences; usually within their limits of available resources for transacting payments (see IIED, n.d.).

For instance, when making payment at community or household level, debate may arise in using either in-kind or cash payments. To the former (payment at community level), investment in community infrastructure like roads, schools, healthcare centers, among others have gained attention from those emphasizing on equality in benefit sharing between participants and non-participants (IIED, n.d.). Also it is claimed to be cheaper and time saving compared to delivery of rewards to households (IIED, n.d.). This approach may thus not entail equity to one's efforts or needs, but has higher chances of ensuring equality.

Important influences to choice of payment to household or community as a whole are; costs of implementation and transaction, number of participating households (willing to participate and eligible to pay), and above all, resources available for the project (IIED, n.d.). To the later, it is often asserted that cash payments are better cause of their divisibility. However, it does not exclude it from the above mentioned influences (see IIED, n.d.). Furthermore, cash payments are vulnerable to pressure of inflation, dwindling of value as it passes hands to the household and misuse or misappropriation at household level (IIED, n.d.). It may also mean increased costs of operation, if inflation is to be budgeted, and thus discourage participation.

Cash payments are also suspected to cause rise in prices of local goods (IIED, n.d.). The logic here is that as many have cash, the demand for local goods increases, causing an increased supply of the product. Besides, cash as an incentive may be context specific. This is very true in societies with

less active markets and thus needing little cash for daily transactions (IIED, n.d.). This further makes in-kind payments more attractive especially if the intervention is to stay pro-poor and equally benefit the poor.

It is argued that payments to individuals' entails higher transaction costs compared to payments at community level and may dilute the incentive (IUCN, 2009). In addition, dependent on the total number of participants in the project, individual payments often results in a decline in the benefits per household (IIED, n.d.). We even have examples from the Integrated Conservation and development projects (ICDPs) with women complaining of their husbands wasting funds to drinking and unbeneficial leisure activities (IIED case example pg. 15). Thus, operating organizations should consider payments at community level as more appropriate in terms of equality in sharing benefits accrued and reduction of transaction costs. The International Institute for Environment and development (IIED, n.d.) argued that such a pay would limit or prevent misappropriation of benefits among small landholders and big landholders.

Contending to the number of participants, it may be costly and devaluing to deliver individuals with benefits if they are so many of them willing to participate and eligible to payments. Thus, cash payments to large numbers of participants may mean increased timely, consultation and transaction costs, and reduced accrued benefits. On the other hand, it may be cheap to execute cash payments to few participants and helps the implementing organization lower costs of consultation, transaction of payment and thus ensures effectiveness of the incentive offered.

Considering in-kind payments, especially with investment into community infrastructure, one can be sure that benefits of the intervention will be enjoyed by both participants and non-participants. This is very desirable in community projects with large number of participants. This further lowers risks of leakage from non-project members of the society of operation. However, the risk in this payment mechanism is that it may encourage free riders and thus discouraging to devoted participants. It also yields loss of benefit sovereignty among participants (see IIED, n.d.).

Therefore, there is practical need to seek participants' preferences in regard to payment mechanism they accrue from the interventions they participate in. This will help in addressing the issue of distributive justice/equity among participants.

In some instances, implementing organization should advocate for labor intense activities such that the labor of the poor, 'a major primary asset of the poor' (IIED, n.d.) becomes a measure with which large landholders can share benefits with the poor landless. They also asserted this would limit dominance of the already powerful elites who often out-compete the poor and landless yet eligible participants (IIED, n.d.).

Seeking individual participants' preferences of payment format to use is of great value to REDD+

interventions. Besides ensuring needs' satisfaction of the participants, it provides the implementing organizations with better alternative approaches of yielding greater motivation and incentives with limited dis-value of the intervention. However, it is noted that the least experienced communities in PES schemes may take initial payment mechanism as a trial (IIED, n.d.). Thus their preferences are bound to change dependent on experiences with the mechanism used. IIED recommends multiple testing of payment preferences to ensure stability in participants' taste of preference most relevant to their needs (IIED, n.d.). Their experience with PES was that the least experienced participants ran for cash payments, which often was misused or yielded less productive results, while those with experience took in-kind or better planned well the use of their cash (also see IIED, n.d.).

Another influential aspect to payment choice may be productivity of one's land (see Yu & Belcher, 2011). The nature of land or productivity of soils can affect the effectiveness of a payment mechanism to achievement of equality, equity and need satisfaction (main principles of distributive justice). This is very possible in lands where previous use has exhausted the soil off its nutrients. Therefore, engagement in tree planting may not yield quick and high yields as compared to farmers on better used or well-farmed lands. For societies with different land productivity, payment format executed would have to focus on equality in benefit sharing for instance invests in community infrastructures (IIED, n.d.). The challenge here would arise if the participants agree on cash payments with aim of flexibility in choice and increase in income flows to meet their household budgets. The risk in giving cash is as inevitable as expressed above. It may also increase the risk of elite capture of benefits by those with more productive land (IIED, n.d.). An alternative would be use of labor intense land use, engaging the labor of the poor as an indirect benefit sharing channel. Yu and Belcher (2011) advocate for studies seeking understanding of the suppliers' perspective of management or ecosystem value, as this may provide insight to possibilities of encouraging participation especially by private landowners (suppliers of ecosystem services). Thus far, as forwarded by many analysts, compensations and inclusive participation seem a better resolution to account for fair distribution of cost-benefit of conservation practices (Pechacek et al, 2012). Without which (inclusive local participation), attitude and support for conservation practices will deteriorate (Kideghesho and Mtoni, 2008).

Magnitude of payment is important to encourage landownes to participate in conservation, as was the case with Canadian farmes and the Riparian wetlands (Yu & Belcher, 2011). However they fear that PES schemes may not be sufficiently sustainable for ecosystem management in the long run (Nkata et al, 2012).

Konke et al (2008) assert that financial compensations are probable solutions to maintenance of forest landscape. They continue to caution that these compensations should not be directly

reflecting the landowners' opportunity costs, but rather high enough to attract desired land uses and ecosystem conservation practices (Konke et al, 2008). Besides, compensations are influenced by, 'biophysical characteristics of the region, productivity of the land for agricultural commodities, the characteristics of the farm, the experiences and preferences of the landowner.' (Yu & Belcher, 2011:209).

Below, justice and equity have been inter-changeably used though often considered as different. For instance, one may claim people are different and so justice would be served if they be treated differently, yet another may claim justice as treating people equally, regardless of their differences. Considering the later, I proceed on defending the fact that all humanity need equal treatment, regardless of class, race, socio-economic status, among other factors that may make them different or rather unique. The discussions held herein, too, look at attaining perceived justice/equity since the terms also have various definitions.

CHAPTER THREE

3 THEORETICAL FRAMEWORK: Theories of Distributive Justice

This section will discuss the theoretical approach to distributive justice; the Pluralist Approach encompasses Egalitarian and Minimalist thoughts on justice. Whilst the Minimalists approve of justice as any form of offer towards improvement of social standards of living, the Egalitarian look at the specifics of equity. Therefore, the Pluralist approach appreciates these differences whilst allowing room for context specific application of respective perceptions of justice. Thus the use of this approach will diversify the scope of understanding and accepting differences in perceptions of distributive justice.

REDD+ initiatives face the challenge of attaining sufficiency, distributive justice and fairness, and establishment of legitimacy and support/credibility in operation (IUCN, 2009). With the use of PES schemes, benefit sharing mechanisms are expected to be sufficient and capable of legitimizing REDD+ initiatives. To achieve sufficiency in operation, records of opportunity and operational costs, the demanded for carbon credits and compliance funds to emission reduction in developing countries should be ascertained beforehand. On the other hand, to attain legitimacy means acquiring global support and credibility in operation. This support needs to come from all stakeholders affected by REDD+ initiatives. It is noted that stakeholders, especially local participants, will highly support these initiatives only when they perceive their involvement as beneficial and fair/just (see IUCN, 2009). This also implies that perceptions and attitude towards any distribution/compensation system has an influence on intervention turnover or outcomes. Besides perceptions of fairness and justice may be another tool to invoke goodwill to conservation (Wunder, 2007:8). According to Choi and Chen (2007), a compensation mechanism perceived as fair would be highly welcomed and performance turnover increased. The issue then is to ensure perceived just distribution mechanisms, but how can this be attained? The response to this depends on how justice and equity are perceived and defined.

3.1 The Pluralist Approach

It is true that the understanding of distributive justice has different takes. The Egalitarians hold it that people ought to have equal rights to available resources and that institutions have duty to equalize welfare or well-being of all people (see Armstrong, 2012: 35). On the other hand, the Minimalists hold it that people have a right to basic needs, enabling them to live a decent, dignified and modest life (Armstrong, 2012:36). The Minimalists thus have a tendency towards a rights or entitlement approach to justice. However, one could consider justice as equal sharing of benefits and burdens globally, nationally or regionally. Justice can also be explained as getting what one is due either accorded to one's actions or rights.

John Rawls' Egalitarian definition of justice emphasizes that Equality is ideally achievable only in societies where members have the same level of talent and ability to make decisions and fight for same opportunities in all parts of the society (Rawls, 2001). This he states would be the perfect state of 'fair equality of opportunities'. However, many other Egalitarians are noted to disagree with this since it's too specific and characteristic of inequalities especially at global level (Armstrong, 2012, pg.68).

In general the Egalitarians emphasize justice as means to equality and freedom in community and politics (Campbell and Mancilla, 2012, xiii) thus equal participation, opportunities and decision making (Campbell and Mancilla, 2012, xiv) resulting to preference satisfaction in the recipient. An approach to ensuring equality in REDD+ payment schemes could tend to a kind of socialist construction of the richer or hardworking earning as much as everyone else in the society. It may even tend to forcing the more talented to do as they would otherwise wish (Campbell and Mancilla, 2012, xvii). Pogge predicts unfeasibility and impracticality in demanding the most talented to redirect their extra earnings to the worse-off in their societies (Armstrong, 2012). It is only natural that people feel attached to their efforts and strengths thus requiring a reward reflecting to their inputs not merely equality to all in society. Thus we probably need to agree with Cohen and Murphy on their advocacy for just social institutions to bring about a just society i.e. institutions influencing individuals or that just institutions ensure justice and fair distribution of benefits and burdens (Armstrong, 2012).

Joel Feinberg (1963) defines a just society as one with either deserved or freely consented inequality. To this, Elisabeth Anderson (1999) would ask of our duty of justice since Joel's definition entails letting people live in an unjust manner just because we assume they deserve or

consented to it. What of those born in those worse-off societies? Will we then be just to leave them there or influence change? We could assert that it would not be just for us to leave those born in places threatened by adverse effects of climate change without our help.

Anderson, on the other hand, insists that our duty is to focus on institutional justice in redistribution rather than leaving the burden to the poor just because they either consented or deserved it (Campbell and Mancilla, 2012, xiv). John Rawls' response would be his principle of 'intergenerational justice' or David Miller's principle of 'Equal sacrifice' claiming that the generation of now ought to act justly in its resource use that those in the next generation may not get limited to meet their basic needs, and that societies can sacrifice their extra earnings for the worse-off created now or in the future, respectively (Armstrong, 2012).

While the Minimalists seek decency or needs provision as justice i.e. provision of basic needs or basic standards of living, the Egalitarians look at equal distribution of important resources to all participants. Inequality is also seen as being unjust yet unfairness is portrayed in the notion that all that are entitled have the right to fair treatment which when denied turns to injustice. This also implies that justice is accrued to one's efforts, outcome or inputs. Thus distributive justice is of big concern to use of PES schemes and REDD's mechanisms for sharing of benefits and burdens, that is 'how it ought to be done'. The most viable justice for practice under PES schemes appears to be desert – justice accrued to one's effort (Armstrong, 2012).

Okin (2005) insists that justice has to begin from the lowest level as families in societies, if at all it is an equal and free society. He also asserts that doing justice would also include recognition of all members of the family especially the women's unpaid labor (Okin, 2005). According to him, this would equate to justice as fairness and ensuring equality in families and societies gradually to regional and further international/global justice (see Campbell and Mancilla, 2012, xx). Therefore, one could say that REDD+ interventions are entirely egalitarian, seeking equal rights and responsibilities of emission reduction to all human kind, a prior to institutional establishments or structures (Armstrong, 2012, pg. 194). Rawls adds that this would mean a kind of enslavement to the future generations who have nothing to do with us now (Armstrong, 2012, pg. 195). Rawls further emphasizes on duty of intergenerational justice and 'just saving' where resource use should not destabilize future institutions from normally functioning to meet peoples' needs. This appears to be part of the current devotion of REDD+ activities – to reduce emissions for the sake of generations now and in the future (IUCN, 2009). However, in its efforts, REDD+ initiatives are facing competition for land from the agricultural and energy sectors.

It is evident that views of justice and equity vary and have no universal definition. Martin et al (2013) also predict difference in perception and conception of the commonly known dimensions of environmental justice, namely; distribution, procedure and recognition or representation.

‘Whilst not always explicit, these principles can often be inferred from the underlying justification for conservation (such as concerns for ‘common heritage’ and future generations), the selection of different approaches to forest protection (such as strict preservation or Integrated Conservation and Development Projects) and in the detailed design of specific interventions, such as decisions to compensate people for harm suffered, or reward them for services rendered.’ (Martin et al, 2013).

Given the importance of justice to individuals, its perceptions consequently determined behavioral changes in all humans and it is claimed to be influential from early ages of human growth (see Martin et al, 2013). Therefore, even in relation to environmental resources and service, justice is important for enhancement of intrinsic value for participating in conservation activities too. Martin et al (2013) affirm that (the feeling of) justice within local hosts and partners in PES schemes are instrumental for achieving long-term conservation objectives.

Martin et al (2013) claim that the principles of justice are often raised in only concerns for common heritage or future generations. This is similar to what Rawls forwarded as intergenerational justice, i.e. justice for the good of those here now and the future generations (Armstrong, 2012). Even in such concerns, distributional issues are focused on sharing of costs and benefits like offsetting forest costs of conservation to the poorest participants (Martin et al, 2013). This is serving as an important aspect of the POVSUS-REDD+ project. On the other hand, usage of integrated conservation and development projects, revenue sharing, PES and other compensation schemes are part of how benefits are being shared (see Martin et al, 2013).

Basing on their adaptation of the three dimensions of justice from Schlosberg (2004), Martin and colleagues forward that;

The distribution justice is understood in terms of split-sharing of the goods (benefits) and bads (costs) within involved and concerned stakeholders/actors, and is claimed to be dominating current debates in environmental justice arenas. Procedural justice, on the other hand is focused on governance instruments engaged in decision making. Similar to claims by Cohen and Murphy (see Armstrong, 2012), they forward that good procedures are meant to bring about just distribution, i.e. they should be able facilitate just distribution of benefits and costs involved (Martin et al, 2013).

However, they admit that this is not always the case since these procedures may be just or unjust in their own way. An example would be in the case of corrupt members in the distribution chain who would take advantage of weak structures to impinge injustice on poor-uninformed locals. Thus they define procedure justice as a possibility only in fair participation especially towards determining distribution mechanism (Martin et al, 2013). This means allowing people to make their choices, access to opportunities and participate in decision making, just as Rawls asserted (Rawls, 2001). Martin et al (2013) also settle on recognition justice as respect of such cultural differences since some societies may consider justice as respect and recognition of their cultures, right to self-determination and the existent traditional decision making procedures. This could also be considered as socially constructed definition of justice, resulting from social movements and organizations from as early as the 1980s (see Martin et al, 2013). However, challenge to these definitions of justice is the counter-face from conservation organizations that claim and assume legitimacy as sources of justice norms, definitions and counts of what problems and conflicts to highlight or undermine altogether (see Martin et al, 2013). Therefore, they resort to using a pluralist approach to justice, to accommodate all definitions of justice and get a wider understanding of how these definitions influence actions towards long-term conservation and development goals (Martin et al, 2013). Also being inspired by Sen (2009), they conclude that there will always be, 'more than one rational argument for resource allocation' with 'impractical possibility of universal agreement' on what is best since inevitable differences exist (Martin et al, 2013). Therefore, much as it would be desirable, there is no benchmark principle for making normative judgments to justify anything. One has to choose one suitable for particular use as was done here.

Informed by the literature reviewed on justice, we decided to consider REDD+ initiatives as Egalitarian; seeking for equity in sharing of costs and benefits whilst preventing leakages. Additionally, the pluralist approach here emphasizes on the reality that there exists variance in perceptions of justice, as will also be shown in the findings below.

CHAPTER FOUR

4 METHODS

There has already been noticed how use of case studies has helped illustrate and establish ideas from time memorial. Bryman (2008) too states that use of case studies benefits writers and readers especially in illustrating hypotheses or ideologies in practice elsewhere. Use of cases is also helpful in generation of intensive, detailed examination and elucidation of unique features in them (Bryman, 2008:54). Cases allow for sample unit analysis of situations that may be recurring or context specific or cross-cutting through different geographical locations, people groups, departments, organizations and nations. It may be similar to cross-sectional research design, comprising collection of data on series of variables at particular points in time, with the variables later considered as cases (Bryman, 2008:48).

This thesis is based on desktop study and not fieldwork because my efforts to carryout a fieldwork study were disrupted by a land conflict that was precedent in the site. Therefore, this thesis write up entirely draws on secondary literature and makes a cross-scale comparative study of the case studies of REDD+ pilots with more or less identical methods of research employed on each case used. These cases here exemplify prevalent social processes in POVSUS-REDD+ pilot areas. Thus, they provide a suitable context for examining how the challenge of distributive justice is tackled in reimbursing PES compensations proposed for REDD+ pilots (see Bryman, 2008:56). Bryman (2008) also argues that exemplary cases allow researchers to examine social processes in particular areas. The three cases here are revelatory and longitudinal in nature i.e. appropriate to illustrate existing differences of local perceptions of justice and they can be studied over time (see Bryman, 2008:56). Secondly, findings on the cases were readily available at the time of this thesis writing. The other two pilots, in Uganda and Ghana, had not offered timely findings and so were excluded from this comparative writing. This also appraised this writing to be a cross-continental comparative study of just three cases of Brazil, Viet Nam and Tanzania. Brazil had not conducted survey on locals' preferences, nonetheless, it was included to provide a cross-continental comparison of the social processes existent in across POVSUS-REDD+ pilots.

Since REDD-plus (REDD+) is piloted in places with predominant poverty, low education and unclear land rights, usage of PES schemes in the selected countries provides attractive field experiences for this thesis write-up. There is variance in preferred compensation formats (denoting perceptions of distributive justice) in these particular cases, yet still have similarities especially in

regards to distributive justice challenges met by operating organizations.

A background check on the pilots will on the existing property rights arrangements, level of education, and existing state of relationships with the leaders and the perceptions of the locals towards distributive justice. This will show similarities and cross-cutting issues existent in all the cases chosen.

Discussions on individual cases will comprise of site-specific analysis of interactions between status of the REDD+ pilot and the subsequent preferences of the local participants. This is done so as to tease out relationship between the status of the REDD+ pilot area and its participants' perceptions of distributive justice. Precautious criticisms on potential steps towards implementation of PES schemes are also made for each case.

Thereafter the comparative discussion will allow for a cross-continental analysis of factors influential to functionality of PES, perceptions and achievement of distributive justice in the REDD+ pilots chosen. The comparative analysis will potentially illustrate the uniqueness of perceptions of justice across the cases, as a tri face, particularly in relation to land, relationships and education. This will also enable harnessing casual relations of perceptions to the locals' status of education, property rights' arrangements and relationships with leaders though this relation was not initially in cooperated in the formulation of the research from which the findings here are extracted. Besides, this analysis will relate the locals' status to their perceptions and check if are the same or not across the continents. Besides, this comparison potentially increases operational efficiency, effectiveness and especially equity in regards to benefit sharing and distribution in PES schemes. Bryman (2008) also asserts that comparative studies help in gaining understanding of social phenomena especially when contrasted and compared with other cases using more or identical methods, as is done here.

Basing on the case findings, implications for given perceptions are made, for which suggestions for action are made as a way forward for REDD+. However, they should not be generalized, but rather treated as context specific.

The challenge met in this kind of desktop comparative writing is that influential experiences met by respective researchers in each case are not known. Therefore reasons for any other differences in the cases are not given or explained. However, this challenge does not outweigh the other advantages of making a comparative study across these cases, such as illustrating distributive justice as a cross-cutting issue or site specific. This implies to the benefit of harnessing similarities and differences in regards to locals' perceptions of distributive justice (preferred payment formats) and their implications for REDD+ initiatives.

4.1 Case Selection Criteria

The REDD+ pilot cases herein were drawn basing on the need to make a comparison across continental countries, i.e. Africa, Latin America and Southeast Asia, participating in REDD+ initiatives. This will help widen understanding of cross-continental challenge of making REDD+ a national framework. It also importantly informs of possible mechanisms and channels for delivery distributive justice to all participants. Here, the local participants preferred payment formats are considered as what they perceive as just distribution of benefits proposed under PES schemes. I focused on searching for pilot areas that had some experience with PES schemes and had already presented findings from preference exercises in the pilots. I realized that many pilots, under different arrangements like CDMs, had already exercised PES payments but REDD+ pilots were only proposed for future compensations. Since I wanted my work to make a contribution to the understanding of distributive justice, I settled on REDD+ pilots proposed for future compensations. These pilots would freshly be undergoing distribution challenges in regards to what kind of compensation would just and enough to yield participants' satisfaction and compliance, as well as serve the objectives of conservation and emissions' reduction. I decided to take pilots from the POVSUS-REDD+ partner countries of Brazil, Viet Nam, Uganda, Tanzania and Ghana. Informed by the literature reviewed, perceptions of distributive justice would be different across these pilots. Thus making a cross-scale comparison (across continents) of distributive justice virtually became very important and desirable. At the initial stages of my writing, I was able to access findings from Brazil, Viet Nam and Tanzania. Though Brazil had not exercised preference tests, I still considered it for the comparison because I needed to make a cross-continental comparison of the REDD+ pilots. Besides, I still had no reports yet from Uganda and Ghana pilots. Questions that ran through my mind ranged from; what impacts does such a payment have on the community's conservation practices and livelihoods, did this cause participants to devote more to conservation or did they abandon the project all together or more participants joined the project, would there be a change in preference for future compensations, what do other pilot areas prefer for payment, to which particular payment mode would bring about both equity and desired conservation behavior (and not affecting REDD+'s integrity). The answers held here are in response to questions specifically regarding: What is the status of the REDD+ pilot areas and how does it influence preferred payment formats? What do the local participants perceive as distributive justice (i.e. reflected as compensation format preferred)? How do these preferences influence REDD+ initiatives?

From Africa, I decided to settle on the Tanzania's Kilosa District pilot since I did not have findings from Uganda and Ghana at hand at the time of my thesis writing. From Southeast Asia, I settled on Lam Dong in Viet Nam's Cat tien National park pilot and Rio Negro APA-Brazil sounded more interesting for the Latin America, both of which have also had a long history with using PES schemes way before involvement with REDD+ in the country's conservation practices. In brief, the case studies are drawn from REDD+ pilots specifically in Tanzania, Brazil and Viet Nam. These cases are all unique and portray clearly that ensuring distributive justice to participants in REDD+ pilots may not be as easy and straight forward as may be asserted in the REDD architecture. It is important to take note of the factors that influence participants' choices and preferred payment formats, and how their preferences implicate the achievement of distributive justice in REDD+'s use of PES schemes.

Brazil, for instance, has been exercising PES schemes particularly through organizations such as Bolsa Floresta programs and has encountered various challenges in meeting the demands of its participants while it pedals towards its predefined goal of conservation (in general) and reduction of deforestation (specifically). In this program, challenges such as misunderstanding of conservation, poverty, corruption and unclear or illegitimate property rights in their areas of operation. Actually, in some of their operation areas, Bolsa Floresta programmers have had to take up the option of making compensations before finalizing with tenure rights (land use rights) certification e.g. as will be done in Rio Negro APA (see FAS, 2013). This is partly due to the usually lengthy and bureaucratic process involved in licensing and formalizing tenure rights. Besides that, reimbursing the locals for their participation has continuously proved to be tough since communities usually have different preferences, and satisfying all was next to impossible. Thus their choices of compensations made have differed from one community to the other, requiring follow-up trial tests.

4.2 Process for Case Analysis

The process of analyzing the cases chosen is focused on the status of: education, property/tenure rights, relationship with operating officials/leaders and existent preferred compensations in the pilots. This is based on simple reasons such as these below.

One's educational level often tells the extent to which one may understand purposes of a particular activity and benefits accrued from it. It also addresses one's decision making and ambitions. Besides, education is predominantly key instrumental in aiding one's understanding of responsibilities and duties associated with particular actions. In instances of low educational level within participants, grasping the link between conservation and environment or climate change, and thus reason for the need for a change in behavior will be vague to such participants.

On the other hand, secure property rights, in this case taken as secure tenure rights, has always been taken as a bench-mark for motivational participation, investment and empowerment especially to poor families (WRI, 2005). This empowerment authorizes locals to decide on what land use to engage in or invest in. Tenure rights are also vital in distribution of benefits from ecosystem services and World Resource Institute asserts it as, 'at the heart of the poor's ability to derive income and subsistence . . . part of a sufficient and sustainable livelihood' (WRI, 2005:56). Implying that the poor's participation in and benefits from ecosystem services is highly dependent on their tenure status or rights. Thus, tenure (land) rights have strong implication to one's participation and access to benefits. Alexander et al (2011) also emphasize that land tenure rights enhance one's involvement and access to ecosystem service benefits.

Besides that, for the poor to attain due benefits, amidst prevailing informal or unrecognized tenure, also depends on their relationship with officials in place. For instance, corrupt and more politically connected officials may deepen deprivation and ignorance of the poor's needs or voices over resources upon which they derive decent livelihoods. WRI asserts this as a limitation to participate in vital decision makings since these politically powerful elites may have vested interests in the same resource (WRI, 2005:57). Therefore, a bad/malfunctioning relationship with the officials may further negatively impinge on the livelihood of the poor, making them more excluded from benefit channels of distributions. A good relationship, on the other hand, will provide motivational incentive and positiveness towards conservation practices wished to be adhered in the respective REDD+ pilot area.

Therefore, it is important to harness and assess preferred payment formats from the local

participants. This is because knowledge of these preferences allows for efficient allocation of scarce resources in conservation activities, and will also enable accomplishment of relative satisfaction and justice to the participants who often rate their self efficacy by turn out of decisions related to their suggestions (Petheram and Campbell, 2010). Assessment of these preferences further allows for measure of possible interactions and conflicts of interest and outcomes from payments to be made. For instance, offering fertilizers to an agriculturally based community puts REDD+'s environmental integrity to question (Greiner & Stanley, 2011).

For REDD+, a successful implementation and use of a particular PES scheme should yield the desired change and a certain extent of satisfaction in participants. To ascertain satisfaction, research for preference tests was conducted. Findings from this are presented below as the choices of the participants that should be considered as what they perceive as equitable to their participation, performance and costs incurred from involvement in REDD+ activities. These preferences should then be taken as focal points for achieving distributive justice/equity in respect to the local participants.

It is important to note that these are not the only prevailing challenges met in pursuing distributive justice in REDD activities. Cases here will only relate to education, tenure rights, relationships and preferences as practical challenges met in using PES schemes, whilst emphasizing the importance of considering differences and uniqueness in particular areas planned for use of similar PES schemes. The cases also show that the preferred modes of compensation are different across the pilots, for which REDD+ activists have to consider as context specific. Lessons usually learned in blue-printing strategies may range from desirable and undesirable or irreversible situations. Thus, to avoid unwanted outcomes calls for search comparisons for better strategic planning and implementation of REDD+ activities elsewhere. It is also important to note that both Viet Nam and Brazil have had a long history with using PES prior to REDD+, for which their experience with PES schemes will provide concrete experience and lessons for REDD+ to better its understanding and planning for future use PES schemes. These experiences are very important as stepping stones and learning grounds for PES schemes planned under REDD+ architecture.

The case findings below will portray most of these characteristic nature of challenges met in using compensations for conservation, providing important comparative lessons for input into the REDD+ architecture. Specifically, these cases will illustrate how aspects of property rights (land ownership), level of education, compensation preferences, and relationship between the participants and leadership; may influence the overall challenge of meeting distributive justice under REDD+ proposed PES schemes.

4.3 Caveats

The case of Rio Negro APA is used here besides its unique and wide experience of usage of PES by FAS. Apparently, there was no concrete exercise of preference tests in Brazil. This is because FAS took up pilot area selection based on pre-set guidelines of their operation. However, comparing this pilot to those from Viet Nam and Tanzania provides larger grounds of understanding challenges in distributive justice. Furthermore, it betters our knowledge on how justice issues can be particular, related and place –bound to local struggles (see Martin et al, 2013) such as low education, poor tenure arrangements and bad relationships which in summation influence locals’ choices and behavior towards REDD+ initiatives implemented in their boundaries. It also helps illustrate and exemplify how these struggles can be cross-cutting through REDD+ pilot areas yet also be tackled in various ways as will be seen in the below findings.

CHAPTER FIVE

5 FINDINGS: Perceptions of Justice across three REDD+ Countries

The following case studies, taken from REDD+ pilot areas in Tanzania, Viet Nam and Brazil using PES, will provide beneficial lessons for REDD+ initiatives. They may increase understanding of how to alleviate prevalent poverty among REDD+ implementers in the developing countries, albeit distributing benefits of participation in a more equitable and just way. It is important to note that all these pilots qualified for REDD+ based on their forests' or lands' endowment in biodiversity, risk of threats from human influence (through agricultural land expansion), additionality and conditionality towards efforts to mitigate climate change and conservation. Typical of these sites is that the inhabitants are marginalized, poor, highly dependent on forest or land resources, low literacy and varying inequality with family-based labor and income. Another characteristic of these sites is the challenge within legalities surrounding property rights, access and use of resources in question, limited political will and unstable or ill-defined structural framework and functioning (as identified in many REDD preparedness papers). Additionality in PES schemes is accounted upon things or conservation practices that would not have occurred without payment and conditionality is accounted upon conditions of conservation practices agreed upon between the ecosystem service buyer and seller (Nelson et al, 2009). PES may also be considered as performance payments or payments for conservation. These cases further illustrate how factors such as education, property rights/land rights and relationships influence preferences for compensation formats, and how in total they may be influential to performance of REDD+.

5.1 Justice in Brazil

5.1.1 Background

In Brazil, Amazonas makes the largest part of Brazil with about 98% forest cover, accounting for 10% of the world's remaining rainforest (Cassola, 2010) yet still faces high deforestation for plantation extensions, settlement, extractions among others also contributing to climate change through emissions of carbon dioxide. Others claim that Brazil contains about 65% of the Amazon rainforest cover, with only 13% of its population living within the rainforest (BBC, 2013).

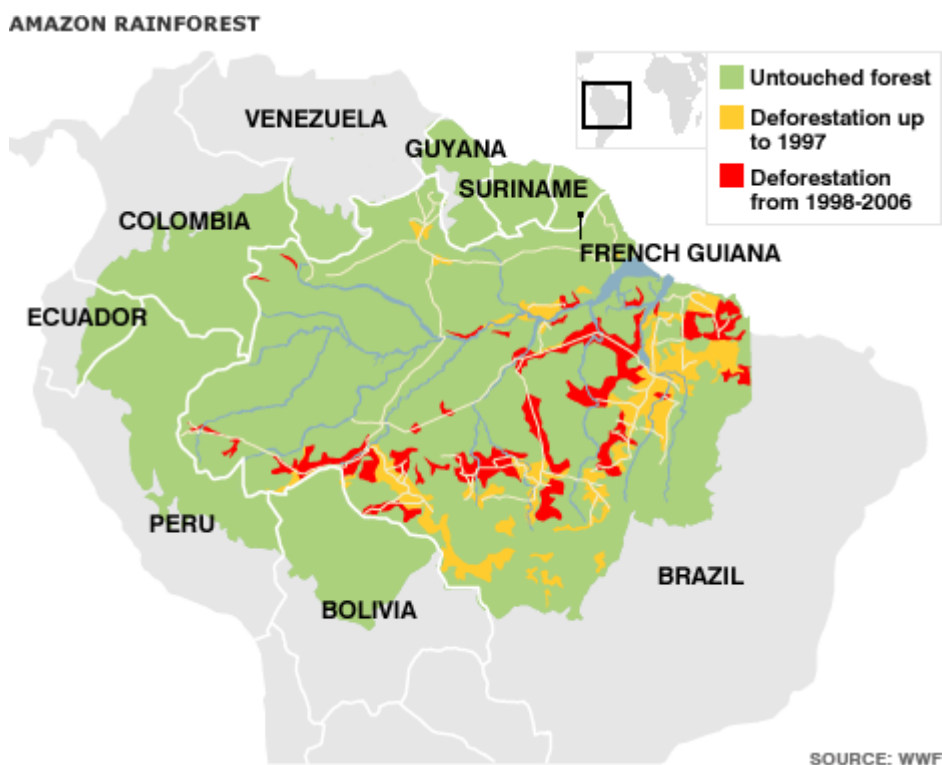


Figure 8: Deforestation of the Amazonas rainforest within Brazilian boundary (extract from BBC, 2013)

Viana (2006) is cited for noting that cultivation of soybeans, non-sustainable timber harvesting and drought-driven forest fires are the bigger threats to the Amazonas forests thus risking carbon stocks and conservation efforts in the Amazonas (Cassola, 2010). The nature of this Amazonas is referred to as 'Deep Amazon' where people depend on forests for livelihood and thus forest use is permitted but also conservation and protection is highly emphasized (Cassola, 2010). The PES ongoing

scheme in the Amazonas is government established under Amazonas Sustainable Foundation (FAS), Sustainable Amazonas Program though currently running as a private-public venture for those interested in reducing carbon emissions from deforestation (i.e. as REDD) under Bolsa Floresta Program.

The Bolsa Floresta (forest allowance) Program is a voluntary program to reduce deforestation and promote sustainable development by rewarding the communities of the Amazon for conserving it states Parker and Cranford, 2010 (see IIED, n. d.). It has sound reputation for use of PES schemes in Brazil, from which many other REDD+ activities can draw experience lessons form. The program was ‘created in 2007 by a state law, Bolsa Floresta compensates and finances sustainable livelihood practices in communities living within protected areas that commit to zero net deforestation (FAS, 2009)’ (cited in Cassola, 2010). The Program promotes sustainable production of non-timber forest products, supports infrastructural improvements with financial provisions of about US \$ 200 per family per year besides paying about US \$ 25 per month per household (IIED, n. d). By 2009, about 6,350 families living in 14 protected areas in the Amazonas were noted to have received US\$ 30 per month per family (Cassola, 2010). Besides this direct payment to the family, the program also support to community association activities, community infrastructure as well as sustainable production of non-timber products from the forest (IIED, n. d.). In this Program, all participants regardless of their primary income activities were to be compensated and offered social services for conducting their livelihoods in accordance to agreed conservation behaviors (IIED, n. d.). However, this was thought to have dangers of misunderstanding and thus taken as a generosity or for granted let alone undermine efficacy of the program says IIED (n. d.)

It was noted in the Bolsa Floresta Program that the problem of deforestation was mainly by economic benefits of tree felling. Besides, the main occupations of the people is agricultural expansion, forest use for settlement and non-timber products, hunting, fishing among others (Suelen Marostica, n. d.). Conditionality in the program participation included attending training on climate change and sustainability besides committing to zero net deforestation. However, since the program is practiced in an already protected area, the issues of additionality haven’t been rectified (Suelen, n. d.).

Bolsa Floresta Program thus aims at cooperating with the indigenous locals by supporting livelihoods and guaranteeing basic needs to these locals (Cassola, 2010). This reflective of a minimalist delivery of justice, compensations delivered in form of basic needs (see Armstrong, 2012). The program functions in a way to compensate those identified as responsible for conserving the forest and emphasize extraction of non-timber products for their livelihoods. However, they haven’t yet undertaken preference tests within local participants.

Site

In Brazil, a pre REDD+ survey was conducted in Rio Negro Area of Environmental Protection (Rio Negro APA) in Amazonas state of Brazil by the Amazonas Sustainable Foundation (FAS). It is located in the right bank of the Rio Negro River and the Rio Negro State Park, also accessible from the capital of Manaus (FAS, 2013). The survey was done prior to the Bolsa Floresta Program (BF) PES scheme planned for Rio Negro APA and it involved 150 households from 16 communities, totaling up to about 1,300 people (FAS, 2013). The households had an average size of about 5 people.

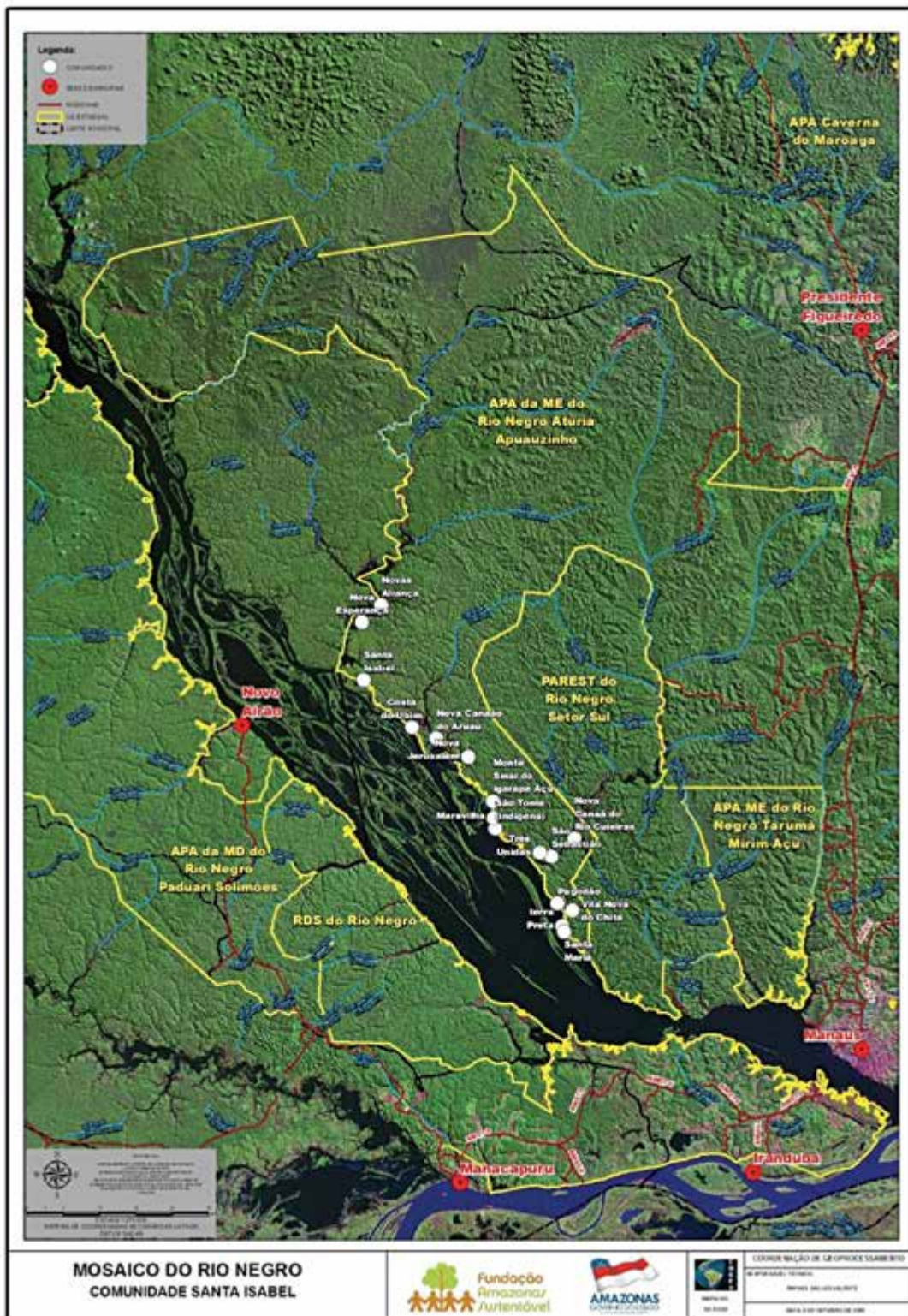


Figure 9: Map of Rio Negro APA (extract from FAS, 2013).

The site was divided into pilot area with proposed BF implementation and control area which was far away from the Rio Negro State Park but similar to Rio Negro APA, and was not to benefit from BF. The education level within the pilot area was low with about 64% of household heads having only elementary level of school education (FAS, 2013). They also noted that half of this population

was involved in mainly small-scale subsistence agriculture, practiced on less than one hectare of land per household.

The pilot area residents are not considered as private owners of the land on which they dwell, instead their rights to resource access and use is merely recognized by the Brazilian Amazonas State that is now in process to document each family's 'right to use' in form of formal certificate of holding (FAS, 2013). So far, only few households have received the document, though it doesn't limit the other pilot residents without from BF benefits. Besides this, the document on use rights does not ascertain right of selling the plot of land, thus the land use and stewardship is only passed on through inheritance. There also seems to be an existing limit on clearing maximum of one hectare per year per household, another management scheme in place (see FAS, 2013:23) restricted to those needing land expansions.

Livestock keeping was minimal, thus limited threat for deforestation or forest degradation. Besides agriculture and poultry keeping (plus livestock like pigs and cattle), the Rio Negro APA residents also practice fishing and hunting. State support or remittances was noted as a main source of cash income to the Rio Negro inhabitants, with about 61% of them getting funds amounting to Brazil's standard minimum wage (FAS, 2013). Besides this, 10 of the 150 households also reported to have earned an average of US\$36 previously from Eco-tourism.

On the other hand, the community showed high support for compensations in form of improved social services, increasing job opportunities, payments and alternative sources of livelihood (FAS, 2013). The local participants also showed interest in tree planting with reason of satisfying their own forest-related needs and commercial use of the forest. Less than 20% of the participants expressed interest in tree planting for carbon sequestration or for environmental services (FAS, 2013:23). This is often existent in areas where people have low or insufficient knowledge of the relationship between trees and climate change or supply of environmental services. Yet still, reasons for held clearing of forest lands were noted as for cropping and not tree planting, as the locals initially claimed (FAS, 2013:23-24). However, the challenge that was met was mainly lacking in efficiently informed prioritization of needs for implementers and the society's households. The survey on compensation preferences that was later conducted showed that many households preferred alternatives that potentially increased their incomes and improved their livelihoods (Suelen, n. d.).

5.1.2 Discussion of Challenges for using PES: Lessons for REDD+

Noted by FAS (2013), there has not been any visible current land clearance within both the pilot and control areas. Instead, FAS gathered that most of the clearance of land occurred in the last 10 years, and was mainly put to permanent agriculture, road construction and housing, with no significant contribution from shift cultivation. This kind of trend was also accounted to the increased monitoring by government and local forest officials, as mentioned by respondents to the FAS survey (2013). This presents high chance for zero deforestation in Rio Negro APA if payments proposed are perceived as sufficient enough especially by the local participants in the pilot area. The challenge to this possibility is the forwarded loss of waged employment, price fluctuations on products and consumer goods and persistent skeptics over establishment of more ‘protected areas’ held by pilot participants. In such a scenario, suggestions for REDD+ consideration would be, to increase job opportunities for the participants. For instance, employing the locals as patrol working alongside a representative from FAS can be one way to increase jobs. However, given a population of 1,300 people, this may only be feasible to about five of them. Question still is on how to just select these five without others rebelling or complaining, and what happens to the rest of the people seeking employment? The notable advantage in soliciting these possible five employees is that there is a population of about 3% in each household capable to work, with some 47% under 16years and considered too young for labour force (FAS, 2013).

For the sake of reduced production resulting from the seasonal droughts and floods, the only thinkable option is to adapt to crops that grow fast within the favorable seasons or adapt crops that survive under the stresses of drought and floods. Examples range from flood rice, cassava and vegetables among others.

In regards to land rights, there is need for speeding up user rights’ documentation. This will help resolve any rising land conflicts within the communities. This documentation also stands a chance of yielding feeling of ownership and thus good management or stewardship of land within the participants, especially those in the pilot area. Often, knowledge of land being ‘state owned’ encourages mismanagement of resources or general negligence of the vitalities accrued from well-managing such resources. It could partly be the reason many of the families in the pilot and control areas feel less bound to the set forest rules. This is evidenced by 47% of pilot residents having no effect of forest rule-changes on their livelihoods and only 37% of those in control area noticing some extent of worsening conditions to their livelihoods as a result of rule-change regarding forest

conservation in Rio Negro State Park (FAS, 2013). Thus the sooner all family use rights' are documented, the better and rather easier it is to motivate personal interests to participate in REDD+ activities.

The education level of the household heads is averaged to primary level of formal schooling (see FAS, 2013). This inhibits more challenges to attaining required understanding of: REDD+ design, BF proposed payment schemes and responsibilities to be undertaken by the local participants in Rio Negro APA. It is already visible that most of the participants did not understand the link between the climate change and conservation, let alone what is actually pertaining to the rules governing the conservation activities. Another sign is the purpose for tree planting expressed as for own use and commercial exploitation, not climate change and environmental services or compensations (see FAS, 2013, table 21). It is claimed that this lack of understanding is resulting from lacking dissemination of the rules regarding forest use and management (FAS, 2013:33). This means that the rules were just never clearly specified to or understood by the residents of Rio Negro APA, a symptom of low and insufficient education. FAS (2013:29) however noted a significant, though small, awareness of forest role in climate change among participants in Rio Negro APA.

There seems to be a good relationship between the locals and forest leadership. When asked for whom would be their preferred delegates for compensation distribution processes, government officials and specially elected village committees got highest votes followed by a collaboration of the village leaders and NGOs, from highest to lowest in rank (FAS, 2013:30). This was the same ranking from both the pilot and control areas surveyed by FAS. A good percentage of the participants believe they can be influential to the REDD+ designing through their locally elected leadership. However, they still feel left out at decision making, later to only be informed of what they should do without consultation or inquiry of their opinions (FAS, 2013). This is dangerous for REDD+ progress especially if the locals decide to boycott participation or any involvement whatsoever regarding conservation in their local areas. Therefore, it is very important to deliver perceived justice for increased compliance and participation from the locals.

Participants perceived conservation as important but were skeptical of its restrictive nature towards access of forest resources. They were also doubtful of the sufficiency of compensations in relation to their opportunity costs incurred in avoiding deforestation (see FAS, 2013:27). This was reasoned as problematic since they depend so much on forest resources for their livelihood.

Encouragingly, some participants were positive towards incentive based conservation with hope that the incentives would better their communities' condition and their landownerships would be legalized (FAS, 2013:31). This was thought to consequently increase household incomes and reduce community land conflicts. They also believed that incentives would increase their incomes and

make them equally better off besides encouraging participation in conservation activities (FAS, 2013:30).

To facilitate distribution of such incentives, the government officials, NGOs and the specially elected committee were frequently opted (in descending order) as able to equally distribute the compensations (FAS, 2013). Reasons for this were not clearly presented, partly because the study was not in cooperating such questions.

Besides, the locals also showed desire for compensations in form of increased job opportunities and delivery of improved social services like hospitals and schools over cash payments and other alternative sources of livelihood (FAS, 2013:29). Unfortunately, the reason for this choice was also not given. One could say that the desire for more job opportunities is, in its own, a sign for preference towards cash payments. Yet still, a better explanation to this can only be got when and if the participants in Rio Negro APA are asked the question of why or give reason in support of their choices. Apparently, this has not been conducted by FAS.

5.2 Justice in Viet Nam

5.2.1 Background

The Vietnamese energy sector is estimated to produce about 20% of the country's total greenhouse gas emissions from only agriculture and forestry department (Hoang et al, 2011) yet also Viet Nam is ranked as first Southeast Asian country to actually establish a national law on PES (McElwee, 2011). Thus REDD+, for Viet Nam was to mainly help ensure short term food security and economic benefits whilst achieving environmental benefits as a long term goal (see Hoang et al, 2011). Opportunities for REDD+ in Lam Dong-Viet Nam, were started by the Netherlands Development Organization (SNV) in 2009. The socioeconomic survey was done in 2010 in four communes, one of which was taken as control while the other three stood as pilot communes (Enright, 2012).

Lam Dong as a pilot province has a history of ecosystem payment structures from 661 program and the payment for protection of forest ecosystem services (PFES) started in 1997 by parliament of Viet Nam (see Enright, 2012). This provided a good start for the REDD+ architecture and PES in Lam Dong, Viet Nam. The management scheme in Lam Dong is a community base forest management (CBFM), perceived by the participants as positive to their livelihood though issues of corruption are also still in existence within the management system (Enright, 2012).

Already in suspicion, involvement in REDD+ activities of forest management comes with limitations now considered as threat to user rights of local participants especially since, it involves restricted forest visits for resources such as herds or ritual sites. Enright (2012) notes this as a potential deprivation of people's access to forest resources which may also scare off future participation from targeted locals. However, Enright also states that the preferred payment has been expressed in household demand and use of loans for capital investments i.e. cash payments are preferred and in practice.

On the other hand, Hoang et al (2011) caution the benefit distribution system's design of being comprehensive of social economic and natural conditions in the pilot, in parallel with rewarding participants based on performance, especially if payments are based on performance and not merely recognized participation. Furthermore, they advocate for land uses that ensure increased income and payments relevant to both forest protection and livelihoods' improvements (Hoang et al, 2011).

Site

Four communes from the Lam Dong Province, found in the central highlands of Viet Nam, form the Cat tien Pro-poor REDD+ Pilot (Enright, 2012). Of these communes, three were used as pilot areas to receive payment while the fourth was taken as control commune, making a total of 280 households in the socio-economic survey of 2010 (Enright, 2012).

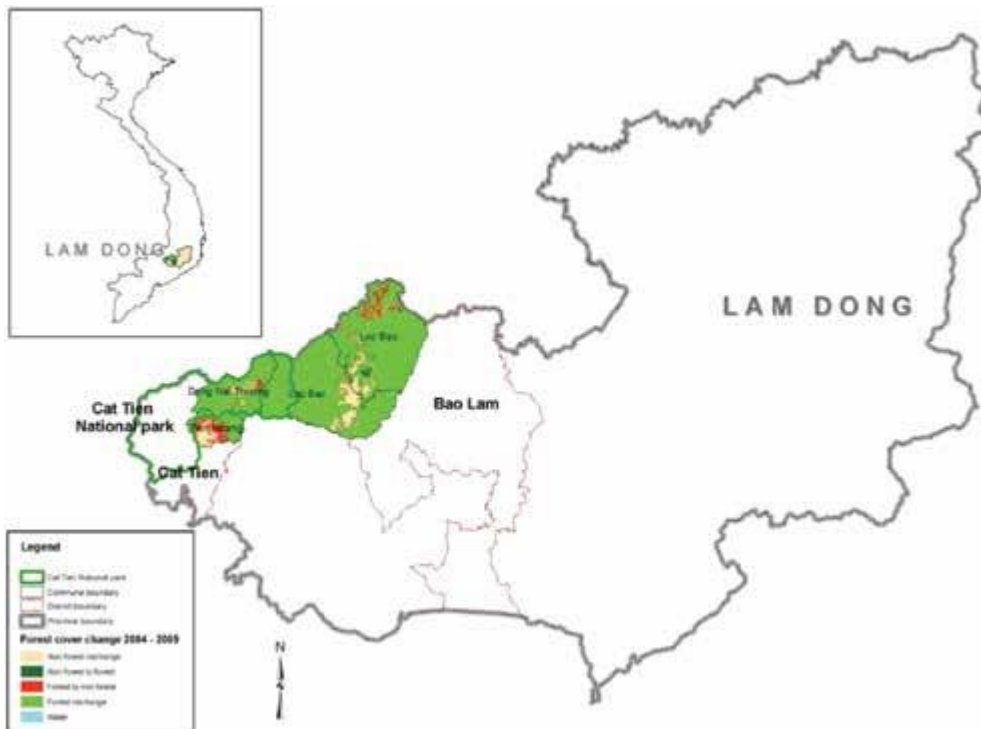


Figure 10: Map of Lam Dong REDD+ pilot in Viet Nam (extract from Enright, 2012).

In all the four communes, poverty level was noted to be high with signs such as; low income status, high dependence on low yield agriculture, low levels of education and limited access to capital for financial investments (Enright, 2012). The formal education was averaged at primary level schooling, beyond which none was noted from the participants in the survey.

Of the existing threats to deforestation, the biggest were found to be expansion of agricultural land and collection of fuel wood, the main primary source of cooking energy for the Lam Dong residents (Enright, 2012). The main income earner to the Lam Dong residents was agricultural production of Cashew, coffee, tea and rubber, notably land-dependent (Enright, 2012). The status of ownership of land is based on state stewardship, also responsible for allocating portions of land to individual households, to be managed for a given period of time (Enright, 2012). This implies that not all of these Lam Dong residents hold certified user rights (also known as the Red Book) and not permanent ownership of land upon which they engage their daily livelihood activities such as

agriculture and housing. Most of this land is dedicated to agriculture, though increments to it have been noted to have resulted from forest clearing in shifting cultivation (Enright, 2012).

There was also reported illegal felling and encroachment of forest land, accounted to agricultural expansions by participants in the focus group discussions that were held (Enright, 2012). The locals claimed clearing forest land for tree plantation and also stated a lacking in their influence towards governance and management of the forests (Enright, 2012:29) However, the government of Viet Nam is claimed to be addressing this low agricultural productivity in the region by occasionally provided support and subsidies as a means of empowering Lam Dong residents (Enright, 2012). At the present level of education, the loans provided through state support programs don't seem to have succeeded as investment capital. This is partly because the locals perceive the money merely as aid for poverty alleviation, often misused by household heads (Enright, 2012). Probably, this money could have enabled purchase of better farming tools, fertilizers besides meeting other financial needs in relation to health care and formal education, especially for their young population in school going age. Enright (2012:16) also envisaged low education as a limiting factor for most households to access information about better agricultural practices that would both better their soil productivity and overall production outcomes.

Another consideration for REDD+ is the healthcare and well-being of especially the older part of the participants. This is because, in Lam Dong, ill-health and death of the majority productive household members had a significant effect on the households' overall income status (Enright, 2012).

Much as there is recognizable need to increase income generating activities in Lam Dong pilot, they also need immediate education on responsibilities that may come with taking loans, so that they can make informed decisions of what to use the loans for. Enright (2012) suggests that installment payments would be best for this situation, with a hope of paying back in the future in case sequestration is not realized. The fear here is whether the locals can sufficiently understand this condition, without getting discouraged by the look of it as a loan to be paid later with interest. Alternatively REDD+ activities could inco-operate extension services to the pilot participants, aimed at educating and informing them of their rights and responsibilities to consider as participants committed to emissions reduction, conservation and recovery of degraded land.

The research conducted in Cat Tien National park showed that locals preferred more job creations (Petheram & Campbell, 2010). Besides that, they also noted that women were more skeptical about cash payments, with fear that cash is prone to misuse, thus preferring compensation formats involving food, fertilizers and jobs (Petheram & Campbell, 2010).

Due to fear of corruption and untrustworthy leaders, Viet Nameese preferred a mix of both household

and communal payments, with preferably their own elected leaders to conduct distribution of these benefits (Petheram & Campbell, 2010). This implies that Vietnamese would prefer both cash and in-kind payment formats. However, giving compensations in form of fertilizers may undermine the project's environmental standards and credibility. Probably REDD+ can increase accessibility of agricultural extension services that may help increase productivity whilst minding that the activities will not hamper the integrity of REDD+.

5.2.2 Discussion of challenges for using PES: lessons for REDD+

It is remarkable that only 10 respondents to Enright's 2012 survey admitted to significance of land conflicts within Lam Dong pilot. Considering this as a sign of minimal land conflicts, REDD+ thus has great potential of peaceful operation in Lam Dong though it would work best with private ownership over practiced rental land use. Partly because there is reported clearing, encroachment and illegal felling of forests, regulations on use rights need more tightening.

Furthermore, there needs to be a policing group both from local membership of Lam Dong and REDD+ representative. This will help monitor and oversee activities close to and bordering the forest. Little is said of the private charcoal and timber companies, since the locals claim to be only buying charcoal for instance for consumption but not making it personally (also see Enright, 2012). However, these companies need to be monitored and cautioned with some kind of tax or fine in case found to be harvesting more than permitted. Continued reliance on fuel wood may give more attraction to such companies to burn more charcoal, increase prices and consequently increase illegal tree felling from the community managed forests. All these activities need to be checked, monitored and regulated for a successful progress in REDD+ activities

Preference for in-kind payments such as fertilizer provision and creation of more job opportunities can be taken as positive remarks that REDD+ can consider in proposed payment schemes for Lam Dong pilot. It is also important to take care in giving fertilizers since this is agreeably a loophole for counterfeit to productive land use.

Low education, as already mentioned, is a big challenge within these REDD+ pilot areas in all five partner countries of Brazil, Viet Nam, Uganda, Ghana and Tanzania. In Viet Nam, in particular, almost half of the household heads in the survey had no formal education; beyond primary level education (Enright, 2012). This ultimately hinders grasping of link between conservation and climate change, let alone prevents easy transmission of knowledge about better agricultural practices that could help overcome low agricultural productivity, deforestation and shifting

cultivation that were noted from the survey in Cat tien pilot area.

Besides, lack of private ownership of land poses strain on REDD+ architecture or design.

Vietnamese perceive themselves as mere stewards over the land and not individual-private owners. This perception further demotivates locals from caring for the maintenance of the land, rather they lookout for opportunities to abandon old land and expand their gardens by clearing forest margins. An opportunity for REDD+, noted from Enright's work (2012), is to provide compensations in 'slow dispersions' and not lump sum. This was partly because the Vietnamese state had tried to provide the farmers with credit through financial institutes such as the Bank of Agriculture and Rural Development but has not been very successful.

With a big number of households involved, the payment to individuals may be dwindling and the project loses meaning. For instance, in the Cat Tien National Park (CTNP) in Viet Nam, payment based on reduced emissions (calculated in relation to Carbon storage) to households proved difficult since there existed many of these managing the forest (IIED, n.d.). The threat that was noted as speculation and agricultural extension of cashew production by rich and poor in the Lam Dong Province (respectively) in Payment per performance did not thus seem legible for the project there (IIED, n. d.). Bleaney et al (2009) is cited for emphasizing that even monitoring of these carbon storages was also difficult additionally to the challenge of calculating Carbon storage accumulated. In such a case, it may just be worth to make payment to participants as a community not individuals (IIED. n. d.). Potentially this lowers equity issues that may be persistent in regions with land disparities such as Viet Nam (IIED, n. d.). Besides, they also claim that large households could easily earn more from economies of scale especially in case payments are made to individual households rather than community as a whole. Realization of these economies of scale is still uncertain since it requires high co-operation within and compliance from all participating households.

There was high support and demand for help in form of fertilizers from many of the respondents to Enright's survey. REDD+ initiatives may consider this as helpful in addressing and informing design of appropriation of payment to the locals in exchange for sequestration. For instance agricultural extensional services on use of fertilizers and conservative alternatives of farming can be substituted for provision of fertilizers based on the knowledge that fertilizer promotion may compromise conservation goals and increased emission of GHGs. In doing this, the possibility of attaining satisfactory equity and justice to both SNV and the Lam Dong participants is increased. The relationship status of the participants with implementing organizations is of great importance in disbursement and facilitation of proposed payment under REDD+. In Lam Dong, the relationship with non-governmental organizations (NGOs) was noted as fair, implying a relatively low trust for

these NGOs (Enright, 2012). In his survey, Enright visualizes that the local government officials and the village councils have more votes from the respondents than had the NGO workers. This poses another tasking challenge for REDD+ initiatives to better this relationship status since most of the implementers are NGOs rather than local government organizations and officials (Enright, 2012:10).

Dissatisfaction with the forest management was expressed with claims of subjection to restricted resource access and practiced unequal distribution of use and benefits (Enright, 2012:20).

Participants also claimed being uninfluential to forest management and demanded for what Martin et al (2013) states as recognition justice, a desire for recognition of their choices and decisions in management.

However, there was noted feeling of binding to comply with set regulations, though still, admittedly a handful of the respondents noted changes in forest regulations (Enright, 2012:22). Building trust is important with great potentials such as increased compliance and participation from locals. On the other hand, bad relationships disadvantage locals from especially access of relevant information and payments, and increases risk of exclusion and appropriation of benefits to elites and the politically favored allies (who could be some of the politically connected local participants).

Some participants stayed doubtful of compensations with reasons that their livelihoods totally depended on forest resources that compensations would not be enough. Furthermore, they were afraid that these compensations may not be equally distributed as desired (Enright, 2012:28).

Yet still, majority of the participants were positive towards incentives with the hope that they would make them better off (i.e. increase incomes), improve their communities' and environmental conditions. However, issues of corruption and equality in distribution of payments predominantly rose as important aspects needing serious consideration (see Enright, 2012).

5.3 Justice in Tanzania

5.3.1 Background

As early as 2008, Tanzania got involved in REDD+ preparation, strategic planning and activity implementation in pilot projects across the country (Carbon Tanzania, n.d.). By 2010, Kilosa District started piloting REDD+ under MJUMITA project developers (Forest Trends, n.d.) and the Tanzania forest conservation group (TFCG), the top conservation non-government organizations (NGOs) of Tanzania (Kajembe et al, 2013). TFCG has a 20 year reputation in dealing with conservation and activities related to participatory Forest management (PFM) in Tanzania, with which it warn over piloting REDD+ alongside Mtandao wa Jamii wa Usimamizi wa Misititu Tanzania (MJUMITA) also known as the Community Forest Conservation Network of Tanzania (Kajembe et al, 2013). The project was aimed at reducing emissions from deforestation by giving incentives to the community, based on results from their conservation and sustainable forest management (Forest Trends, n.d.).

About 80% and more of the Tanzanian population is believed to depend on the country's woodlands and forests for both timber and non-timber products (World Bank, 2002), earning them about 54% income per village within Tanzania (Dyngeland & Eriksson, 2011). Implying that daily livelihood activities presented threat to deforestation and degradation, ranging from collection of both timber and non-timber forest products to make a living. With this in mind, climate change is expected to reduce Tanzania's staple food (Maize) production by about 33% according to NAPA (2007) estimates due to annual increase in temperature and drop in rainfall (see Carbon Tanzania, n.d.). This also means that the food security of many households dependent on natural resources, such as forests, may deteriorate as Maize production reduces. Already in practice, deforestation for charcoal production and other forest harvesting are done at high rates whenever there is an agricultural failure (crop failure in a harvesting season), notes Dyngeland & Eriksson (2011) and Kajembe et al (2013) particularly in Kilosa District. This evidences dependence and use of forests as fallback positions in bad seasons of agricultural production. Food aid in times of such crisis may be a relevant means of disbursing compensations to participants eligible for REDD+ payments.

Site

Kilosa District is one of the nine NGO pilot sites, participating in the REDD+ POVSUS project in Tanzania (Dyngeland & Eriksson, 2011). Kilosa District has a population of about 489,513 people with an average household size of 4.6, according to the census of 2002 (Kajembe et al, 2013).

Kilosa District is believed to cover about 20% of the Morogoro region at a distance approximated to 300km from Dar es Saalam and the Indian Ocean Coast (Kajembe et al, 2013).

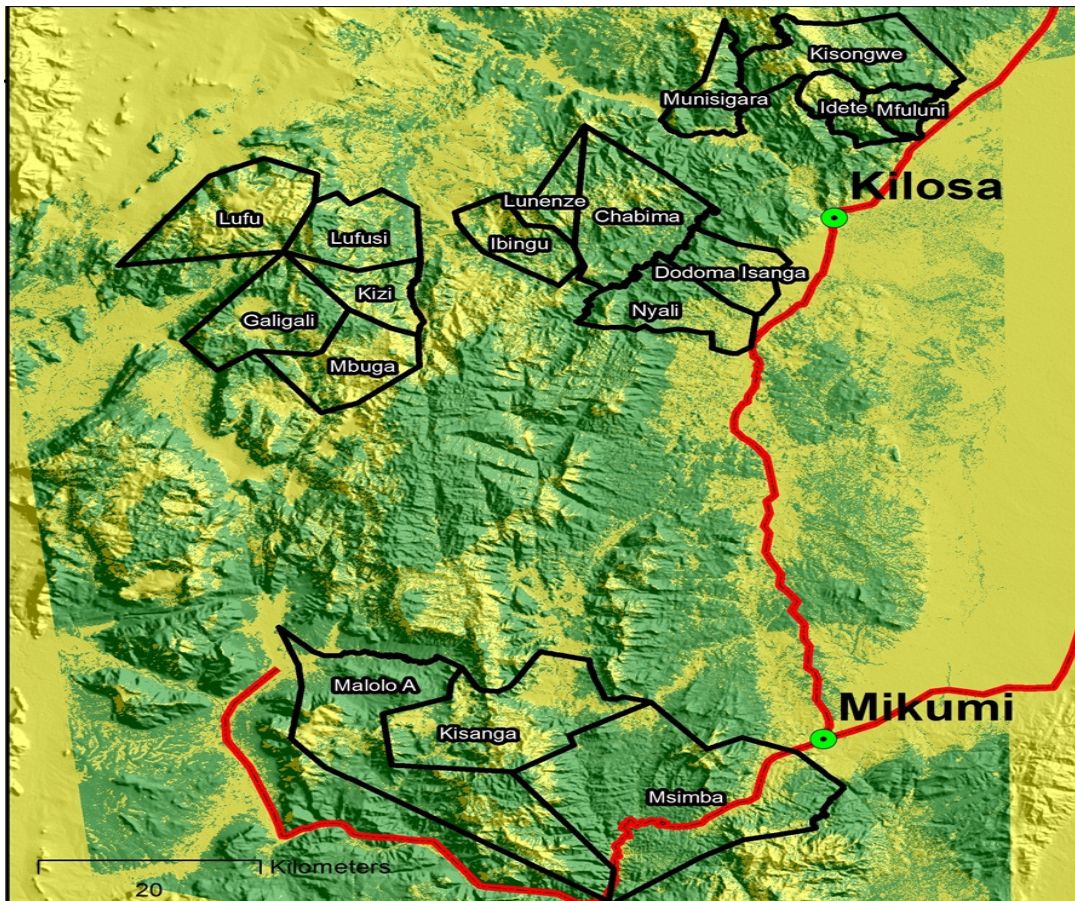


Figure 11: Map of Kilosa District REDD+ pilot (extract from Dyngeland & Waized, 2013)

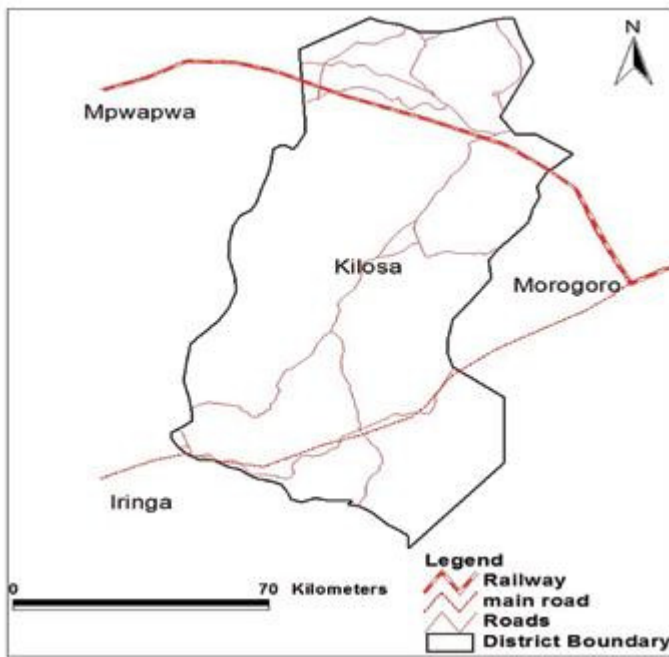


Figure 12: Cross-sectional map of Kilosa District (extract from Movik et al, 2012).

Each household in the pilot had about 1ha of land, which was either acquired, and or later passed on, as inheritance to children (Kajembe et al, 2013). In general terms, Tanzanian Land Policy holds it that the land is in the trust of the president, and is demarcated into Reserve/conservation land, Village/settlement land and general land put under the care of the commissioner of land (Kajembe et al, 2013). In the village land, we find settlements, agricultural plots as well as forest put under communal/open access and those under PFM or community based forest management (CBFM) according to Kajembe et al, (2013). They also assert that threats of deforestation and forest degradation arise as influence from population increase, pushing locals to encroach and clear forest land for extension of both agricultural land and settlements. Additionally, introduction of new crops like Simsim are also presented as motivational to clearing of forest land based on belief that Simsim drains farmland of nutrients and so needs to be planted in fresh grounds (Kajembe et al, 2013). The newly cleared land (illegally) could be abandonment in case of failure of crop. Pham et al (2013) noted that in Tanzania, there is inadequate respect or recognition of indigenous and customary land holding, besides persistent land conflicts between pastoral and farmer groups. Particular to conflicts, Kilosa is well-known for dominance of such pastoral-farmer conflicts. However, in a socio-economic baseline survey conducted in Kilosa district, Kajembe et al (2013) reported respondents claim for harmony and understanding of living together with the pastoralists in the district.

In a Capacity Needs Assessment (CNA) report from Tanzania, it was noted that district and village

level participants in REDD+ implementation in Tanzania had limited knowledge and technical skills. Additionally, the knowledge of REDD+ discourse and awareness was limited to the national level (Ernst, 2012). This inadequacy of information at local level motivated and influenced a 5 year training designed to develop dialogue mechanisms, leadership programs, to identify required skills and capacities for continued implementation of REDD+ in Tanzania (see Ernst, 2012). This kind of plan, in short, verifies the existence of poor (if any) dialogue/communication between leadership and local participants. It also illustrates that leadership, skills and capacities of the local participants may not be up to date to the required progress of REDD+ implementation in Tanzania. However, according to Kajembe and colleagues, Kilosa district had a good general education level within the surveyed participants, with about 73% having a primary level education, 2% attained secondary education, 1% obtained higher education and only 24% had no formal education (Kajembe et al, 2013). Much as the level of education was relatively high, the participants were noted for emphasizing wish for continued education, only that distance to schools was too far (Kajembe et al, 2013) that they forfeited school. Relating this knowledge to climate change and effects, they were informed by respondents that they understood climate change in-relation to temperature, precipitation and disease trends (Kajembe et al, 2013). This may mean that what Ernst (2012) noted could have been in relation to insufficient knowledge of participants' duties, rights and responsibilities under participating in REDD+ interventions. Kajembe et al (2013) confirm this by skepticism noted in respondents, who also were curious to find out how much they would earn from involvement or proposed payments. This portrays that the locals may perceive their participation as business from which they can earn more income, better their living and increase food security and health status in their homes as well as community at large.

Knowledge of forest role-play in mitigating climate change seemed relatively understood by about 75% of the respondents, who also added request for international financial assistance for them to adapt and cope with climate change (Kajembe et al, 2013). This illustrates the preference for cash compensations among participants, though they asserted a priority for indirect payments and preferably facilitated by either an NGO or specially selected village leaders over government officials (Kajembe et al, 2013). This in part also shows that there is little trust bestowed on government officials, often caused by corruption and fear of elite capture by officials interested in business as usual. The relationship between village leadership with the locals was reported to be good (83% vote) and NGO too (71% vote) though the local government had the least (45% vote) (Kajembe et al, 2013). This shows that the relationship between the villagers and the local government (representing the central government) is fairly bad. Ernst (2012) affirms this by asserting that there is poor governance, limited power, ignored voices and disrespected right of the

locals to participate for instance in decision making processes. This exemplifies lacking in recognition justice (see Martin et al, 2013) and has left the locals feeling abandoned and excluded. They then rebel by poaching and other illegal activities within protected/conservation areas close to their village boundaries (see Kajembe et al, 2013).

Biomass energy consumption was noted as the highest threat to deforestation though villages were claimed to have bylaws governing access and use of the community (also known as open-access) forest, estimated at 86% from primary forests within the villages in the district (see Kajembe et al, 2013). Besides, those with relatively high income earnings were noted to be massively involved in forest product's related businesses (like timber and charcoal production), and were also very keen to involvement in REDD+ especially focusing on extra income from compensations proposed (Dyngeland & Eriksson, 2011).

Additionally, the locals' main income source is agricultural, often affected by El Ninos, fluctuating market prices, crop diseases and conflicts between farming and pastoral groups within the district (Kajembe et al, 2013). This claim was also confirmed in other reports. For instance claims for existence of corruption within leadership and consequent distrust from the locals, was affirmed by voiced preference for compensations and payments to be disbursed and managed by a specially elected committee in collaboration with TFCG. This was based on reason that this would be more transparent and trustworthy channel of distribution (Dyngeland & Waized, 2013). Further more, their research showed that most preferred payment was an in-kind format with requirement of infrastructural developments of dispensaries, schools, roads, water supply form either rain harvests or pumps (Dyngeland & Waized, 2013). This was perceived as better way to increase income and more durable benefits compared to cash payments. Cash was also preferred for community investments especially when it was ascertained to be too little for households (Dyngeland & Waized, 2013). Additionally, community infrastructures would be accessible to all its members. Besides this, monetary needs were also raised with keen interest in paying all participants an equal share and prioritized pay to households then investment in community development projects (inform of infrastructures), regardless of levels of participation (Dyngeland & Waized, 2013). It was believed to ably satisfy self-efficacy in relation to participation (see Petheram & Campbell, 2010). Much as money (cash) was among preferred payment formats, it was often raised with caution that some past community projects had ended with failed promises for infrastructure, so cash was to accompany and sustain such uncertainties (see Dyngeland & Waized, 2013). This further implies predominance of distrust and lacking confidence in one's effort or performance to yield desired results. Some participants hoped that cash payments would ably substitute their incomes from charcoal burning, which they claimed was an activity only for the during drought seasons

(Dyngeland & Waized, 2013).

Interesting enough, one of the reasons for wanting a specially elected committee to oversee distribution of payments, over their existing local government/village leaders, was the fear of political interference within these politically elected leaders. These political leaders were particularly thought to corruptly disappropriate payments meant for the community and households (Dyngeland & Waized, 2013). The politically elected leaders were also thought to easily divert community funds for private needs, thus opting them to merely supervise or collaborate with TFCG in facilitating compensations (Dyngeland & Waized, 2013). Generally, this may negatively hamper participation especially if returns from efforts are continuously faced by persistent corruption and political interest interference.

While a handful of participants supported the patrolling team to earn more, majority claimed that supervision of the forest was a responsibility of the community, entitling all members to equal pay (Dyngeland & Waized, 2013). Implying a support for equal pay to all community members since they all participate and make an effort to avoiding deforestation (and forest protection), i.e. just pay accrued to ones' effort (see Armstrong, 2012). A participant was noted to appraise widespread awareness of importance of forests in claiming that even the children had developed care for the forests (Dyngeland & Waized, 2013).

5.3.2 Discussion of challenges for using PES: Lessons for REDD+

It is noted that land in Tanzania is in the stewardship of the president, from which it is allocated and demarcated into various uses as stated above. At local level in Kilosa, land is often forwarded as of importance with assertions showing high degree of feeling of ownership and freedom of command over land. The titling process has not been so fruitful too, since the land is mostly under village entitlement, within which the residents further disintegrate to uses such as settlement, agriculture and forest reserve and harvesting (see Kajembe et al, 2013). The big challenge however is that operational rights of ownership are based on inheritance – apart of traditional/customary land rights- which is also noted as not nationally recognized or often disrespected in Tanzania (see Kajembe et al, 2013). For PES schemes to successfully work in any location, it is stated that tenure/ land rights should be secure, clear and nationally recognized. This is hoped to ease identification of rightful participants and service providers of the ecosystem service in question (see Wunder, 2007). Thus, REDD+ interventions have to work alongside legitimization of such holder rights. Conflicts such as those between farmers and herders (famous in Kilosa District) should be finally resolved,

otherwise efforts of the farmers in the community will be fatal with rebelling herders living a lifestyle contrary to conservation practices of the farmers in Kilosa particularly. There is claim that these conflicts have either subsidized or stopped (Kajembe et al, 2013), but I emphasize on initiation of stability, peace and common understanding between the farmers and herders because they both have influence on progress of PES and overall conservation goals in Kilosa District. Some authors like Kajembe et al (2013) have attempted to suggest inclusion of both groups in conservation practices and benefits are overly shared within these groups of people. The problem however is that the herders (also known as the pastoralists) are constantly in seasonal movements with many herds of livestock and are seemingly unstoppable in their movement. Thus PES design should be considerable of such differences and allow flexibility and inclusion of all concerned stakeholders, for further prevention of leakages.

On the other hand, education levels in the Kilosa villages surveyed seemed to be relatively good with instances of some respondents holding a secondary level education. This is very promising especially in empowerment trainings regarding forestry management and carbon-related information understanding. To confirm this knowledge, most of the respondents to Dyngeland & Waized's survey for preferred payments had reflections of payment formats preferred with reason such as more payment ambitions based on base cover of their reserved forest or carbon their forest stores (see Dyngeland & Waized, 2013). Knowledge of impacts and remedies of one's actions have more than often been noted as of intrinsic value, especially in regard to conservation interventions. For instance, it can only be imagined how easier it is to conduct trainings on land use plans in Kilosa based on shared information and understanding of what land use may increase carbon stocks and yield more payments or what actions would increase forest covers and earn more carbon credits. However, this is not enough to cause action or change in lifestyle of the locals in Kilosa. There is need for more technical and alternative income source-oriented training for better and more sustainable livelihood activities other than practiced charcoal burning claimed as a fall back position for failed crop yields (see Kajembe et al, 2013). It was also noted that some respondents were very specific in their request for education and training on better tree species which could remedy few or small-tree cuts for more charcoal, enhanced use of energy saving stoves, better agricultural practices requiring small plots of land but producing big yields, among others (see Dyngeland & Waized, 2013). I reckon REDD+ payments in Kilosa district should be considerate of mainly food security measures or presented as food relief aid in case of crop failures. However, this also leaves REDD+ with another burden of measuring crop losses for every failed season of crop-production, let alone to determine what lose should or not be compensated.

Also, behind the thumbs up given to local management of forest resources in Kilosa (see Kajembe

et al, 2013), there is distrust of local village leaders in the districts. Their work showed that the villagers preferred to elect their own, rather new village committee to facilitate the distribution of payments over use of the existing politically elected leaders (Dyngeland & Waized, 2013). This was based on fear that the politically elected leaders may not do a good job, would embezzle funds and are corrupt that they may pay some people and exclude others (see Dyngeland & Waized, 2013). Persistence of distrust and poor governance relations may cause devastating and undesired PES schemes' outcomes since REDD+ is mainly operating with use of already existing structures noted as corrupt, malfunctioned or inefficient and uneven or dispropriative in practice (see Vatn & Vedeld (2012), Corbera (2012), McElwee (2011) and Petheram & Campbell (2010)). It is thus of vital necessity that REDD+ activities try to better these relations and develop trust within the local participants and its implementers and or intermediaries. They should also emphasize on openness and transparency in operation, thus limiting instances of corruption and fund impropriation. This also illustrates Martin et al (2013) principle of procedural justice.

With all this in mind, the preferred payment formats were noted to be need for both cash and in-kind payments. Apparently, this decision/choice was informed by knowledge and fear of corruption, failed promises and dispropriative management of funds that needed plan B's such as infrastructural benefits to the communities (see Dyngeland & Waized, 2013). This clearly shows that past experiences of failed promises to, for example, build a community dispensary or school or road have been tackled by asking for use of both cash and in-kind formats. The cash would probably address bureaucratic process of constructing community infrastructure. On the other hand, the infrastructural benefits would address instances of corruption or embezzlement of funds, as well as fear of insufficiency of monies that may be disbursed through PES (see Dyngeland & Waized, 2013). There was even claim that infrastructural benefits potentially last longer than project payments and are not equally prone to misuse by either households or responsible leaders in-charge of distributing the funds (see Dyngeland & Waized, 2013). Therefore, in a situation like this, PES would be very successful if designed as partly cash and in-kind investments in community infrastructure. Interestingly enough, there were no voices raised for fertilizer needs though productive tree species were requested to substitute ones that were cut for timber and charcoal (see Dyngeland & Waized, 2013). This further shows success in the already conducted trainings or education probably on climate change awareness, agricultural improvement and conservation importance prior or during REDD+ implementation in the Kilosa District. This assumption is informed by the fact that Sokoine Agricultural University is collaborating with REDD+ initiatives in Kilosa District (see Kajembe et al, 2013).

CHAPTER SIX

6 DISCUSSION: COMPARISON OF PERCEPTIONS

Influential aspects towards attaining distributive justice may be similar across all three cases above. However, the challenge of distributive justice is being battled in three different ways, here referred to as tri-face. The following discussion of the implications for REDD+ will be informed by literature reviewed, field experiences and participants' preferred compensation formats (reflection of perceptions of distributive justice). On the other hand, the notable differences and similarities across the cases above are illustrated in the comparative discussion below.

6.1 Distributive Justice in TRI-FACE: Comparative Analysis of the findings

In the following paragraphs, a comparative discussion of these factors is made across the above elaborated REDD+ pilot cases, with aim of harnessing similarities and differences within the cases. Later on, implications of the preferred payment formats (from each case) are discussed to raise awareness and caution for future consideration in the design of PES for these cases above.

1st Face

In all cases above, it is notable that land holdings ranged from 2-1 ha per household and ownership is through inheritance. Much as land titling and holding clarifications is pronounced as vital for PES (see Wunder, 2007) and also very important for access to benefits especially for the poor participants in conservation activities (see WRI, 2005); only Brazil seems to have taken a serious step towards this need. FAS (2013) state that the Brazilian state is in progress towards certifying each indigenous household's use rights for forest resources within their vicinity, though about a handle-full have got this license so far. The process is slow and as bureaucratic as presumable, but likely to work in the long run. Challenges of time involved and cost of licensing use-rights is one of the obstacles facing Brazilian participants, thus decision to pay all residents in the Rio Negro APA regardless of license holding or not. This partly confirms claims of bureaucracy asserted by the WRI (see WRI, 2005). Whereas there is claimed progress registered in Brazil, Tanzania is claimed not to recognize (or undermine) such customary rights and Viet Nameese continue in a mix of whether they are just stewards or owners of their land. A decision to make compensation based on such land holdings may need critical cautioning of who are or will be rightful beneficiaries of PES

payments to be embursed. Probably consideration of payments to all based on participation and not land ownership is desirable for especially Tanzania and Viet Nam too. This will also help avoid leakages in the project from either nomadic groups (e.g. pastoralists in Kilosa-Tanzania) or emigrant groups and those claimed to be illegal settlers in the pilot areas. Otherwise, strictness to ownership may limit potential emission reductions from contributions of these named groups. While I also encourage continued work towards legalizing land rights, I suggest it to be a procedural outcome and not main focus of operating PES schemes in REDD+ interventions. By this I imply that legitimizing ownership of land should only be emphasized as a process for involvement but not as a basis for deciding who gets paid or not. The challenge in following this is that most of the participants or pilot habitants are financially limited to attain this as a prerequisite for participation. This is because of the often existent corrupt and bureaucratic process of legitimizing land ownership or use rights, as was significant in Brazil (see WRI, 2005; FAS, 2013). Furthermore, basing payment on for instance size of land under conservation over participation may only encourage capture of benefits by those able to invest more land, thus increasing income inequalities in pilot areas and not poverty alleviation (aim of REDD+ pro-poor activities). This affirms to the importance of land in compensations, as was earlier asserted by Wunder (2007). It also attempts to allow desert payments to be made, such that participants are compensated based on their efforts and not ownerships (see Armstrong, 2012). Just as the Egalitarians assert that justice can only be achieved if all members of the community have equal access to the resources in question (see Rawls, 1971 & 2001).

2nd Face

As Muradian et al (2009) note that, "PES schemes are not just a matter of reducing transaction costs, defining clearly the traded environmental service and straightforwardly allocating property rights. Usually, they also entail a substantial degree of coordination between stakeholders...." which can only be achieved if all stakeholders have similar understanding of the problem and bear a good communication dialogue within them. In such a way, it will be easier to communicate responsibilities, duties and equitable outcomes are more than just potential, but rather subsequent and consequential to this cooperation. Therefore, PES schemes may not yield desired outcomes of practice or social behavioral change in places with bad relationships within stakeholders, poor tenure rights, and limited understanding of environmental process in relation to human activities. This can be taken as a clear sign of low education, limited information of adhered activities and poor communication in relation to environmental governance. These factors consequently influence one's decisions to participate in environmental initiatives as well as make well-informed price

negotiations and later good choice of payment format, for case of PES schemes in REDD+ initiatives. Vatn & Vedeld (2012) already noted this as a weakness in the existing governance structures, needing restructuring. Rawls and friends also predicted that justice can only be served if institutions in place are just (see Rawls, 1971 & 2001; Armstrong, 2012).

Governance issues, denoted here and presented as corruption and bad relationships, could further translate into economic burdens and obstacles (WRI, 2005) especially in regards to natural resource management and equitable benefit sharing. The case findings above show that corruption is existent in all pilot areas of Tanzania, Brazil and Viet Nam. Whilst the Brazilians still have a comparatively good level of trust for their government, the Viet Nameese and the Tanzanians openly vote for specially committees to facilitate payments. Taking existing leadership as role models for distribution of benefits from REDD+, the results across nation-cases shared here are entirely different. For instance while Brazilian APA Negro participants voted for the government officials along with a specially elected committee to facilitate payments Viet Nam on the other hand preferred their local leaders to do the same duty, whilst Tanzanian Kilosa District participants preferred both the specially elected committee as well as the REDD+ officials over their politically elected leaders. This further shows that the cases had different levels of trust attachments to similar bodies (i.e. government, NGO representatives, local leaders and community members). It is also affirmative to difference in perceptions of which channels would ably facilitate justice, an apparent emphasis presented in the Pluralist approach to environmental distributive justice (see Martin et al, 2013).

Additionally, relational tension in the pilots above informed choices for who was preferred to facilitate payments from participating in REDD+. A collaboration of state representatives and specially elected committee was preferred in Rio Negro APA-Brazil, collaboration of specially elected committee with representatives of SNV in Lam Dong-Viet Nam, and a collaboration of representatives from TFCG with a specially elected committee too in Kilosa-Tanzania. Additionally, the Kilosa participants opted for both Cash and in-kind payments so as to address persistent corruption and elite capture. With REDD+ intensions of using existing structures, corruption should be empathetically top in the agenda of concern meetings, discussions and planning. Situations like this increase need for REDD+ national designing process to be more case specific and to work on local issues of leadership, especially if they plan to use the existing institutions and instruments of governance in its attempts to be cost effective in operation.

However, across the cases, it is notable that the local participants have some skepticism towards their leaders, shown by their desire for a collaborative management and disbursement of PES benefits.

3rd Face

Looking at educational issues, participants from Viet Nam and Brazil seem to be worse off in knowledge of climate change link to forestry and other land uses. The education level is shown to be primary level at top most, yet Tanzania's case there was at least about 1% of the participants educated to a tertiary and secondary level of formal education (see Kajembe et al, 2013). Further more, the participants were able to relate their payment ambitions to scale of forest cover they increase or carbon stocks (see Dyngeland & Waized, 2013) in Tanzania, whilst this was heard of in neither Viet Nam nor Brazilian cases. Education and sharing of information is very important for participants to make well-informed decisions on compensation formats to wish for. Brazil, in general, has often been marked as well-experienced with use of PES (see IIED, n.d.) though case of Rio Negro APA proves that information and experiences from other PES pilots has not been generously shared within all other piloted projects in Brazil especially in respect to limited resource access. This was showed by raised concerns and request for increased access to forest non-timber products such as poles (see FAS, 2013). However, opting for alternative income activities can be claimed to be a benefit from experiences with PES or that participants in Rio Negro APA have had a good training and education on conservation in relation to land-use practices. On the other side, Viet Nam has openly been accused for not sharing relevant information with locals either regarding clear definitions of rights, responsibilities and duties under REDD+ or regarding links between environmental practices and climate change (see Enright, 2012). Consequence for lack in such information results in wishes such as requests for fertilizers by the Viet Nameese participants (see Enright, 2012), which totally opposes ethics of REDD+ operation to eliminate emission of greenhouse gases. Brazilian participants, on the other hand, by default prefer alternative livelihood activities which potentially increase their daily incomes, over agricultural improvements or enhancements (see FAS, 2009). This is probably because the Rio Negro APA participants are not highly dependent on agriculture for economic or business purposes but rather for mainly subsistence purposes. However, if they were dependent on agriculture for income and food, as the Tanzanian and Viet Nameese participants, probably the preference for payment would be entirely different. But evidently the Tanzanian participants opted for cash and in-kind based on existing relational status while the Viet Nameese participants opted for fertilizers due to insufficient knowledge of relationship between such land use-practices to climate change or degradation or emission of greenhouse gases and the like. Further in Tanzania, there was remarkable desire for more education and information access to more productive agricultural practices and better timber-

tree species and charcoal effectiveness (see Dyngeland & Waized, 2013). This is an eye opener to necessitate the payments to be relatively satisfactory or perceived to be equitable and just enough in relation to ones participation, especially for harvest of high participation. Otherwise, the results may be continued charcoal burning and timber harvesting from the conserved or worse leakage to unprotected forests, just to compensate themselves for more income and business as usual behavior sustained especially in Tanzania. This would be contradictory to desired outcomes of REDD+ use of PES schemes, especially that to encourage participation. For Viet Nam case, agriculture is very important livelihood occupation and is the main income earner to the participants. Therefore, whatever decision on compensations to be made should be considerate and in cooperative of income and food security issues. Preferably, agricultural extension services, along with some sort of credit services would be desirable and potentially yield higher returns from participations than cash handouts to households. This would help participating farmers to relatively compensate for possible loses to conservation land-use changes to be implemented under SNV in Viet Nam. Besides, there is need for continued information dissemination and trainings for both Viet Nam and Brazilian cases, especially in regards to issues relating land uses to climate change, deforestation and degradation. Similarly, education on fundamentals of REDD+ initiatives, especially regarding enhancement of traditional species and not only introduction of commercial species, should be carried on in Kilosa District of Tanzania. This will assist make even understanding between what practices promote or compromise conservation of biodiversity, emission reduction and livelihood improvements in all case pilots above. This implies that all findings show the need for more needs specific education to be carried out in all pilots above.

6.2 Implications for REDD+

PES remains poorly tested especially in developing countries as compared to appraised examples drawn from Costa Rica and Latin America. The main environmental services sold are; Carbon sequestration and storage, biodiversity protection (engaging corridors and buffer zones), watershed protection and protection of landscape beauty (hunting grounds) (Wunder, 2007). Integrated community development projects (ICDPs) and community based natural resource management (CBNRM) as the most practiced paradigms in conservation of especially biodiversity have mainly practiced compensation, alternative activities and livelihood practices, and enhancement of habitat (IIED, n. d.). Continued experimentation of PES schemes in Brazil, Viet Nam and Tanzania have presented appealing implications for REDD+ progress. While Brazilian participants opted for

mainly alternative livelihood practices, Viet Nameese desired for fertilizers and Tanzanian demanded for a mix of both cash and in-kind payments. Notably though, all the cases portray some level of preference for cash (highly denoted in Brazil), in-kind (highly prioritized in Viet Nam) or mix of both cash and in-kind (mainly opted in Tanzania), only that the levels or ranks of preference were different from case to case. The design for PES schemes under REDD+ may have to take these differences into consideration, for better case specific progresses. However, the specific preferences of PES formats, in each case, will present different implications for REDD+'s operation.

Apparently, there has been no follow-up study on the direct implications or changes in the trends of behavior resulting from the preferences illustrated above. Therefore below written can be considered as the likely outcomes from perceptions presented in the cases here.

In Brazil, the Rio Negro APA participants preferred compensations that would avail an increment to their incomes (see FAS, 2009). The reason for that was probably influenced by the need to be able to meet timely health and educational financial needs. This however sounds like an easy and straight forward provision of cash hand-outs to the participants. Other considerations, such as the number of participants in the pilot, may always influence what each individual participant will receive as compensation. Furthermore, compensations to be disbursed are influenced by carbon markets, with fluctuating prices (see Wunder, 2007). Implying that, if the carbon price is low, payments to locals will also be low and consequently unsatisfactory. This is partly because the pay will be less by transaction costs (Böner et al, 2009). Therefore voicing income from alternative livelihood activities like Bee keeping may arise though overall benefits may be low especially since bee keeping may not be an activity for all in the pilot, and investment capital may be inadequate or lacking among interested participants. Furthermore, likelihood of high transaction costs and Carbon price fluctuations may hamper and dwindle what individual households will attain in Brazil. Much as all participants are declared eligible to compensations in the pilot, the question of satisfactory participation still prevails. If the compensation is perceived as insufficient, incidences of illegal forest harvesting may continue or even low participation in conservation activities or non compliance to desired land use plans.

In Viet Nam, the Lam Dong participants present high desire and preference for fertilizers as a payment format. Well, clearly the supply of fertilizers would be contradictory to operational ethics under REDD+. Furthermore, fertilizer use would go against REDD+'s desire to remain conservative, and also fertilizers enhance continued emissions of Methane, Sulphur and Carbon from soil sinks to the atmosphere. This is definitely not desirably under REDD+. Along with authors like Enright (2012), I suggest the compensations be considerate of Vietnamese desire to improve their food security status and increase their incomes, since almost 90% of it is earned from

agricultural production. However, this consideration does not support fertilizer use; instead farmers' training in conservation agriculture would be desirable for achievement of sustainable crop growth, reduced fertilizer dependence and reduction of emissions from intensive agricultural land-uses. To ensure this is satisfactory before the local participants in Viet Nam may heavily depend on how the trainings are conducted. Emphasizing the link between various agricultural practices and climate change may be the best entry point in such trainings, and would yield high intrinsic value over importance of soil in moderating local environmental changes and crop yields. Many may however claim that conservation agriculture is not efficient in terms of improving food security, though they will likely agree that it is more sustainable within low-income populations who often have high desire for fertilizer use but lack appropriate knowledge on fertilizer use. As may be the case in Viet Nam, educational trainings and workshops specifically directed towards agriculture and other land uses, should be of focus as part of rewarding participants.

From Tanzania, the Kilosa District participants opted for a mix of both cash (money hand-outs to individual households) and in-kind (communal infrastructural development projects involving construction of a dispensary, school, roads and the like) compensations. This would be viable under REDD+. However, the issue is in what much the community would have earned, such that it can be converted to cash and in-kind benefits opted by the Kilosa participants. If the payment turns out to be low, this will discourage participation, as Kerr et al (2011) noted in individual payments for communal tasks especially in Tanzania. He also cautioned that monetary incentives may undermine collective action towards activities already motivated by social norms, mainly if these norms are not respected (Kerr et al, 2011). Besides, it is noted that Carbon market prices are not stable or predictable (see also Corbera 2012), thus REDD+ initiatives have to design their compensations based on these uncertainties in the market and speculations among the local participants. There is no guarantee that, if cash and infrastructural developments are done in Kilosa, the locals will stop encroaching the forest boundaries or stop burning charcoal or dealing illegally in timber production. This is because these activities seemingly earn the locals with more income than may be disbursed through REDD+ (see also Kajembe et al, 2013). The locals too are skeptical of whether the pay will be enough, in that they already are curious to know what they will earn from participating in conservation (see also Dyngeland & Waized, 2013). These uncertainties hinder decision making of what kind of payment to make to Kilosa District participants. Furthermore, it does not give direct indications of automatic switch in social behavior among Kilosa participants. This implies that while communal compensations through infrastructural provisions may be the most equitable compensation, guaranteeing desirable land use practices may be a difficult assertion to make. Trial payments are necessary to ascertain required outcomes, which one time payments cannot unveil

(see IIED, n.d.). With already noted limited funding in REDD+ (see Wunder, 2007), the need to carry out these trials may only present more challenges of funding to the already constrained budget and the need to remain cost-effective.

6.3 Recommended way forward for REDD+

Much as PES schemes offer multiple promises of conservation, in brief as 'selling nature to save it' (Corbera, 2012), we have to admit that selling nature comes with repercussions both desired and undesired. Particularly under REDD+ pro-poor activities, the cases above have illustrated the likelihood of elite capture (like the richer and politically connected participants) in case corrupt institutions are used. This will further exacerbate existing inequalities and accelerating poverty in the pilots. Findings from Tanzania showed that food insecurity may worsen since food production will be negatively affected by climate change (see Collier et al, 2008; Corbera, 2012). There is predicted conditional and unreliable income (Corbera, 2012), often running shorter than project life span (Mahanty et al, 2011), and possibility that the costs of transaction are likely to be born by the local participants. This is possible when compensations are made less by transaction costs (see Greiner & Stanley, 2011; Greiner, 2012). This can come to pass especially if issues of education, land tenure/property rights, and corruption embedded in relationships are not properly addressed. Corbera (2012) further asserts that itemizing nature, such as is done through use of market instruments like PES schemes, yields negativity towards conservation practices that may be seen as unprofitable. Yet still, we have to admit that involvement or participation of local people in conservation activities yields likelihood for sustainable management of the natural resources involved (see Corbera, 2012). However, participation and satisfaction of the locals in participating is affected and influenced by vital factors needing attention from operating organization or REDD+. Thus, the recommendations here are mere emphasis on already voiced challenges that face REDD+ in its pursuit for distributive justice and equity whilst using PES schemes. The suggested solutions are mere emphasis of these challenges as focus for progress.

- The case studies above show that the level of education-relative to the understanding of involvement, duties and rights of participants under REDD+ is generally low (at or below average primary level education). Further more, Mahanty et al (2011) also noted that most intermediaries within the operating NGOs had insufficient knowledge, thus misunderstood the projects implemented. Persistent low knowledge will adversely affect capacity building outcomes from participants. Therefore, it will negatively affect the participation levels and

negotiation ability of the local participants. REDD+ should immediately focus on increasing information sharing and educational trainings to the local participants for better progress, preferably that relevant and related to linkages between human activities, land uses and environmental quality or broadly climate change.

- The link between climate change, Carbon markets and deforestation has also been noted as still minimal both within local participants and some intermediary personal. A bout a handful of the locals has clearly pictured climate change as a threat to their livelihood (see Wertz-Kanounnikoff et al, 2011). It is important for REDD+ design to in cooperate learning sessions where such links are emphasized for instance advocating for implementing states to in cooperate environmental studies within the education system, as early as primary level. This has the capacity to increase widespread knowledge and understanding of environmental issues, and consequently may increase interest in participating and complying with REDD+ implementation, with higher voluntary efforts and less pressure for incentive-based participation. Furthermore, this will yield intrinsic motivation within local participants, whose livelihoods is so dependent on the productivity of forests and subsequent land. Education in relation to importance of forest conservation stays necessary and ‘crucial to sustain peoples’ involvement and commitment to reducing deforestation’ (FAS, 2013:33). For instance in Brazil, Conservation, and not incentives per say, was supported based on the perceived importance of forests and desire for long-term access to forest resources (FAS, 2013:33).
- It is also important for REDD+ to assess expectations and preferences of local participants for payment. Already, there is fear that PES incentives may create bad attitude towards conservation, such as 'no pay, no care' (Corbera, 2012). In the cases explored above, it is evident that most of the participants are committing their effort to conservation with hope of better life, improved income, and better jobs. In Viet Nam, there was hope that if compensation made is in form of fertilizers, then their rice production would improve (see Petheram & Campbell, 2010; and Enright, 2012). The risk in providing fertilizers is that REDD+ would stand to lose environmental soundness, and activities involving increased land productivity may be more detrimental to soil Carbon stocks and biota (living organisms). This knowledge seems to be unknown or insufficient to the Vietnamese locals in particular. Another risk in emphasized incentive conservation is that participants who are income or profit oriented may abandon the activities immediately at the enclosure of the projects or end of payments. In such a situation, REDD+ may have to provide some agricultural extension services, as emphasized for Viet Nam. Similarly, the trainings with local participants should increase agricultural highlights of what practices are desirable for sound conservation especially in Viet Nam and Tanzania too.

This is because the Kilosa participants in Tanzania also had presented need for tree species with better charcoal productivity and not for instance trees with more Carbon intake or involve in restoration of lost tree species in their forest. However, across cases above, prioritization of preferred payment formats deferred, with Brazilians preferring cash to individuals over in-kind (expressed by need for jobs), Vietnamese preferring in-kind over cash payments to both individual households and community (denoted by high emphasis for fertilizers then job opportunities), and Tanzanians too opting for both cash to individual participants and infrastructure to community (in-kind payment format). In such scenarios, keeping in mind that REDD+ has to be context specific, the suggested solution would be giving payments as preferred at the moment but leave room for trial payment tests, with alteration of payment formats for agreed payment years. However, my opinion would be that payments should be made collectively to the communities. Collective compensations reduce costs of transaction (Greiner, 2012, and Corbera, 2012) and highly prevent leakages from non-participants. This is because both participants and non-participants can enjoy benefits to communities, for instance schools and dispensaries will serve the whole community irrespective of participation or involvement in REDD+. To have this action perceived as justice to the participants, will depend on how reasoning and negotiation with participants is relayed. It may also depend on the relationship held with the implementing organization, i.e. if they keep their promises to the local participants. Greiner (2012) also insists that collective compensations work best where local institutions are strong and trusted to manage and distribute revenues (or benefits) equitably.

- In all cases, land tenure rights are seemingly different yet significantly influential to participation and benefit access. Suggestion for REDD+ designing process is that precedent land tenure should mainly be formally recognized and put to writing (Mahanty et al, 2011) such that both landless and traditional land-rights holders can be included in the project's activities and benefit programs. Additionally, this will allow time and access to finance required by the worse off participants to legitimize their land holdings.
- From the look of cases above, emphasis on payments based on private ownership may exclude indigenous practitioners often holding only user rights and not ownership over land and forests in their dwellings such as in Brazil. The emphasis here is on the need to be flexible and encourage (if not help) prior legitimization of existent land holdings and user rights before the projects commence or at its' initial stages of operation.
- Particularly for Viet Nam, it is advocated that the PES scheme chosen should be production based (Hoang et al, 2013 as cited by Greiner, 2012), since the Vietnamese have expressed

increased productivity from their farms as a way to keep them busy on their farmlands and not encroach forested areas. Trial payments would be best to analyze behavioral change relating to conservation, participation and disbursed payments. However, it is important to mind that the agriculturally related compensations should not overlap the environmental integrity or objectives of implementing REDD+. It is also necessary to be careful not to introduce land-intensive use activities in the name 'production based compensations'. Instead, activities such as bee-keeping can be encouraged as a means by which the Vietnamese can supplement their farm production, thus increase their overall production returns or incomes.

- From the view of all cases provided above, it is visible that relationships with existing politically elected leaders may not be sufficient enough for REDD+ to accomplish its goals in conservation. It is recommended that REDD+ initiatives should then emphasize that the leaders they use be open and transparent in management. Vatn and Vedeld (2012) advocate for institutional change or reforms, restructuring and monitoring to phase out corruption. It is vital to note that the use of PES is being guided by the notion that markets are best way to encourage and govern conservation, albeit market failures in the past conservation activities (Lockie, 2011). However, for these markets to properly function in developing countries implementing REDD+ and proposed for PES, REDD+ should be able to deal out existing corruption and poor governance and relationships (as noted in all the cases above). Corbera (2012) also noted that level of trust and values attached to forests critically affect participation and performance of locals in activities especially those involving PES. Vatn & Vedeld (2012) further emphasize the need of willingness from recipient governments to engage in administrative reforms capable of sufficiently scrap-out corruption and bureaucracy. Keeping in mind that there is no, one size fits all, along with Angelsen & Wertz-Kanounnikoff (n.d.) I emphasize the need for REDD+ interventions to be flexible and robust enough to fit local conditions and contexts of implementing PES schemes. This can be done by planning and designing activities based on the persistent factors in the site and perceptions of justice amongst implementers. Furthermore, REDD+ in cooperation of PES schemes cannot be easily generalized and implemented (see Muradian et al, 2009) unless the above discussed influential factors are seriously taken into consideration in design and implementation processes of set activities. They also insist that approaches focusing on only efficiency, taking distributional issues as of secondary importance, may get limited in both scope and vitality/usefulness (Muradian et al, 2009). Thus consideration of these factors will enable prevention of repeated undesired outcomes of operation or conservation at large. Therefore, the emphasis here is that issues of distributive justice should be given attention as much as is given to issues regarding other forms of equity,

efficiency and effectiveness of REDD+ interventions at all levels of implementation.

From the cases above, it becomes clear that distributive justice may be multi-faced and perceived/reflected in various ways. This only strengthens the theory held in the literature reviewed, that stated that fairness and justice is perceived differently. These perceptions further inform ones level of willingness to participate in any intervention. IUCN (2009) declared that stakeholders are rational participants who only get involved in profitable interventions, with attitudes such as no pay – no care (Corbera, 2012). It is also undeniable that these perceptions later inform the choice of payment format and mechanisms/means of disbursing and facilitating these payments. The participants presented their preferred payment formats with high expectation of equity and justice if their choices are granted. While REDD+ initiatives seek to improve livelihoods and alleviate poverty whilst promoting conservation and mitigating climate change, to limit leakages would need sufficient delivery of justice amidst differing perceptions among local participants. The pluralist approach has illustrated these differences by categorizing them into three principles of distribution, procedural and recognition (see Martin et al, 2013). These principles have been portrayed by choices of distribution channels, need for structural adjustment (dealing with corruption) and desire by participants to be influential and participate in decision making regarding forest resource management, respectively. The Egalitarians have also emphasized that all participants have equal rights to participation; decision making and access to resources (see Armstrong, 2012). Consideration of this in design of PES schemes for REDD+ compensations will help ascertain support from local participants who often think of their participatory efficacy especially in respect to decision making (see Petheram & Campbell, 2010) and efforts to bear consequential opportunity costs. Predictions of increased performance turnover by Choi & Chen (2007) will be confirmed when and if the preferred compensation formats and mechanisms of payment yield satisfaction within the participants. Therefore these perceptions of what will be a just payment need serious analysis and consideration for progress of PES schemes in REDD+ initiatives.

CHAPTER SEVEN

7 CONCLUSION

Whilst acknowledging the variance in context in which PES schemes are (to be) implemented, issues such as education, land rights, relationships with leaders (depicting kind of leadership and governance in place), and individual preferred compensation (with which to derive satisfaction) will always influence decisions made by both the local participants and the REDD+ officials. The knowledge of climate change, marketability of ecosystem services and benefits sharing, need to be broadened and disseminated to all stakeholders involved in REDD+ activities. Steffen et al, (2005) assert that human perceptions of global change (climate change) and risks associated with it are keys to the kind of resultant societal responses from any intervention. These perceptions can be changed if not influenced through provision of relevant and persuasive education to local participants as emphasized here. Especially for climate change, local-participant access to relevant knowledge of causes and impacts of climate change potentially raises intrinsic motivation beyond payable or incentive-based motivation. Also, addressing them with significance of their participation and efforts may encourage voluntary compliance and commitment to the suggested land-use changes and resource management procedures. Intrinsic motivation is very important because incentives and other compensations to be disbursed are merely short time motivators thus uncertain and time bound (Mahanty et al, 2011) and may not always be equally satisfactory. The literature reviewed elaborated on the varying perceptions and definitions of justice and equity though the cases above overly showed justice as equal payment to all both participants and non-participants in the pilot areas. However, there is still a bit of mix within the participants for a participation based or performance (results) based compensation particularly shown by some Tanzania participants opting for Carbon stock-based while others falling for general involvement to enlarge forest base (see Dyngeland & Waized, 2013).

Informed by the literature reviewed, a Pluralist approach to distributive justice was adopted, since it accommodates variety in understandings of distributive justice without minimizing their uniqueness from site to site. This therefore supported the opinion that REDD+ initiatives are egalitarian "seeking equity" and hoping that existing structures will help in effective and efficient delivery of distributive justice to local participants.

However, with uniqueness in the REDD+ sites used here, findings show that factors of low education, poor/bad relationships with leaders and unclear property/tenure rights have significant

influence on perceptions of distributive justice. The following preferences of payments, mechanisms and channels to facilitate distribution of benefits are thereafter informed by these perceptions.

The discursive comparison of distributive justice across the 3 different continental REDD+ cases above presented a tri-faced approach to tackling the challenge of attaining distributive justice in a local participant's perspective. A few similarities such as size of land per household, traits of persistent corruption and their being REDD+ pilots are given. Additionally, the diversity in solutions and reasons for chosen channels to facilitate distribution of benefits were elaborated. Subsequently, likely implications for REDD+ are stated and followed with suggestive recommendations. Finally the conclusion drawn emphasizes that REDD+ initiatives can still achieve distributive justice provided that more attention is focused on these prevalent and influential factors to perceptions and participations of locals in pilot areas.

Besides addressing the issues of low education, poor relationships, unclear property/land rights and varying preferences, REDD+ design needs to maintain a reasonable flexibility in its activities, duration of contracts and continuously assess the impacts of using market instruments for conservation. Particularly, impacts of these market instruments (in this case PES) on poor people's livelihoods are not well known. Given rigidity to pre-requisites such as titled land-ownership, REDD+ initiatives may turn out discriminating against the landless or more beneficial to large scale land owners over small-holders (Muradian et al, 2009). Without ignoring issues of justice and equity, it is best to admit that using market instruments does not make REDD+ initiatives an exception to such challenge which also contributes to the feasibility of PES (Muradian et al, 2009). They further emphasize on the importance to revisit varying notions of distributive justice within and from all stakeholders involved (Muradian et al, 2009). Here, I have majored distributive justice as a challenge, from the local individual perspective. Influential factors to achievement of distributive justice have also been outlined as existent in all REDD+ pilots, needing attention and re-focus as entry points and potentials for equity in disbursing payments to local participants. Future research can thus be focused on other stakeholders such as intermediaries and project designers of REDD+, and how they influence acquisition of distributive justice as well as assess what they consider as just. A combination of all this information will help REDD+ planners to design a more equitable distribution mechanism for their PES schemes. I also call for more research on ecological and livelihood feedback from using PES as informed by the risk of out-competing food production for tree planting (Bryan, 2012), as opposed to the expected profits from participation and compensations proposed. Alexander et al (2011) also express fear that REDD+ might increase value of land thus encouraging land grabbing and appropriation of natural resources for their presumed

profitability. Vatn & Vedeld (2012) inform that use of market incentives requires well-established institutions. Further, markets may not always be able to address the issues of deforestation and corruption. Whereas, educating all stakeholders of their duties, rights and obligations as well as informing of all relevant environmental linkages, may well empower participants and inform of what respective channels to undertake in case of misunderstanding or need of help and clarification way beyond the capacity of promoted incentive-based conservation practices.

In summary, this comparative study has illustrated how issues of low education, poor land rights, and bad relationships can significantly influence participants' choices of preferred payment formats across three cross-continental countries. It has also been able to present these issues as cross-cutting through all REDD+ pilots across continents. In combination, all these aspects always influence the performance and progress of PES schemes in REDD+ pilots in all countries, except that the levels of influence may vary just as perceptions of what is just vary. This thesis write up has shown how focus on these factors can be turned from being only challenges to becoming means to solutions, necessary for consideration in planning and designing of PES schemes under REDD+. Solutions are diverse, and not limited to those recommended above. Further research is needed to search and combine perceptions of what would be considered as a just distribution of payments at national, regional and local levels.

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