
INTERIM REPORT

A red Maasai thread woven into a web of social-ecological complexity:

The Cooperative and Adaptive Governance of Common Pool Resources
& The Implications for Empowerment

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INTRODUCTION

Worldwide arid and semi-arid regions such as the East African Horn, including Kenya and Tanzania's rangelands are facing risks related to climate variability¹. Climate variability is currently posing challenges for the abovementioned African grasslands that are characterized by shrubs and woody vegetation and less than 600 mm rainfall per year (Huhó et al., 2009). Two recent case studies have been carried out approximately during three months from 17th February 2014 until the 10th May 2014, in Maasailand Southern Kenya to amongst others research how increasing water scarcity impacts agro-pastoral Maasai communities in terms of the control and governance of their common pool resources (CPR) such as rivers and land. It appears that the two case study villages of Ilkimate and Iloshoron located in Enkutoto's Group Ranch, indeed cope with decreasing rainfall patterns and possible long-term droughts. However climate variability is not the only driver of change affecting them. In fact complex interrelated drivers of change in terms of modern politics, formal education, increasing individualism and the advance of land privatization processes, pose serious challenges for the future of their livelihoods and culture.

My research has focused particularly on the following main research question: How do the agro-pastoralists of Ilkimate and Iloshoron, two villages located in Maasailand, Southern Kenya perceive their individual and collective level of empowerment, intra-cooperation and participation in terms of regulation and access of CPR and in terms of sustaining their daily livelihoods within the context of a changing social-ecological system?

For this interim report I have deliberately given attention to the conceptual framework and the theoretical perspectives as well as to the key research findings and discussion based upon insights from on the one hand commons theory combined with complex system dynamics and on the other hand political ecology combined with empowerment theory to be able to address intra-cooperation in terms of CPR and the concept of empowerment adequately. Due to limits of space I have reduced the introduction and the background information to one page. Yet in the final thesis these parts will be extended. The two case study villages in Enkutoto exemplify that climate variability as well as sociocultural, economic and political institutional changes are all part of structural developments to which local people directly need to adjust their livelihoods as well as their sociocultural perceptions and practices. As such it is particularly important to broaden understanding about the viewpoints and needs of affected individuals and communities, since this can foster policy formulations and strategies that are more context specific, culturally sensitive and suited to local priorities, needs and issues.

Thus on the one hand it is crucial to develop a thorough academic understanding of what such changes mean to resource dependent agro-pastoral communities such as the Maasai embedded within a dynamic, complex social-ecological system as well as how these changes influence the governance of CPR. On the other hand, it is also important to place the complexity of these perceptions and experiences within a larger long-term process of empowerment.

¹ Within this interim report an explicit distinction is made between the phenomena of climate change and climate variability. Climate change implications are often scientifically uncertain and contested due to the fact that they necessarily have to entail long-term future projections that basically extend over hundreds of years and several climatic regimes. In contrast, climate variability and increased hazards in terms of long seasonal droughts and erratic precipitation trends are already observable in many sub-regions of Africa (Martin et al., 2013). In terms of climate related issues I will mostly refer to climate variability, as this presently seems to be of immediate concern.

1 BACKGROUND INFORMATION

Kenya is a sovereign state in East Africa bordered by Tanzania in the south, Uganda in the west and by Sudan, Somalia and Ethiopia in the northern region. The country has different climate regions ranging from warm and humid along the coastline, to mild forests in the west and arid desert areas in the north. However, the IPCC recently reported that the sub-regions in Africa are one of the world's most vulnerable regions to immediate climate variability and long-term climate change. This is because most of the continent strongly relies on natural resource availability due to the fact that agriculture and livestock are two major economic sectors. Current academic concerns are also specifically focused on declining and increasingly irregular annual precipitation trends (Pricope et al., 2013). The second major cause of change impacting African pastoral livelihoods includes ongoing shifts in land usage. In fact, in 2005 The Millenium Ecosystem Assessment predicted that by 2050 African land use and land cover changes will be four times as significant than climate change as drivers of environmental change and biodiversity loss (Pricope et al., 2013).

Maasailand is located in Southern Kenya in a mostly semi-arid savanna landscape that historically stretched 150.000 km² from Southern Kenya into Northern Tanzania. Both the abovementioned issues of climate variability and land use changes are present concerns for this area. For decades, livestock mobility in Maasailand has become increasingly constrained due to fragmentation and privatization leading to livelihood insecurity in a hazard prone region for climate variability. Fragmentation is occurring through the creation of physical and administrative boundaries by amongst others subdivision, converting land for other purposes such as agricultural cultivation and protected areas and compressing Maasailand due to an increased density of people and animals (Goldman et al., 2013).

Turning to the field, this research has been carried out in Maasailand in two villages: Ilkimate and Iloshoron from 17th February 2014 until the 10th May 2014, facilitated by the local host organization ILEPA, based in Narok. According to the formal group ranch official Rereu Nkurruna², the two villages are part of the in total nine villages situated in Enkutoto's Group Ranch which approximately covers 132200 acres of land excluding 1500 acres which were confiscated by a foreign outsider. This group ranch is part of Elang'ata Enterit location based within Osupuko division. Osupuko division is part of Narok South district. Narok South district, together with Narok North and West constitute Narok county. Enkutoto's Group Ranch was created in 1985 to give legislation power over the area to the group ranch in order to counter investors interested in tourism and conservancy developments. The area around Enkutoto is relatively lush with several water streams, forests and surrounded by hills.

Ilkimate consists of approximately 31 homesteads with 1200-1500 inhabitants in total. Exact population numbers are unknown due to the fact that only men are officially registered with an approximate number of 450-500 men, excluding women and children. Iloshoron consists of 14 homesteads with approximately 700-800 inhabitants.

² Semi-structured open interview conducted at 29th April 2014, Ilkimate.

2 CONCEPTUAL FRAMEWORK AND THEORETICAL MODELS

For the conceptual model and the theoretical analysis of my research, I will make use of several theoretical approaches. Derek Armitage has written extensively about the governance of common pool resources (CPR). In the research article ‘Governance and the commons in a multi-level world’, Armitage uses commons theory informed by complex systems analysis and by critical social theory, namely political ecology (2008). I have taken a similar theoretical starting point from which I will illustrate why I have not chosen a community-based natural resource management (CBNRM) approach through comparing CBNRM with commons theory. Furthermore, I also use a theoretical perspective from adaptive governance regarding the key role of institutions and social capital. Lastly I will elaborate on relevant concepts from empowerment theory to analyze my particular case study.

CBNRM in comparison to complex commons theory

Commons scholars such as Elinor Ostrom have significantly extended the body of academic literature on the management of CPR since Hardin’s work on the Tragedy of the Commons in 1968. Governance scholarship originally focused on building a theoretical understanding of amongst others monitoring systems, distribution of benefits and costs, resource system boundaries and design principles for community-based management of CPR (Ostrom et al., 1999). However current thinking in commons theory is geared towards complex systems analysis with a focus on concepts such as scale, reorganization, uncertainty and resilience (Berkes, 2006). This means that CPR management is seen as the management of a complex and adaptive multi-level system. Yet two characteristics of CPR are still regarded as part of basic CPR theory. Firstly, the exclusion or access of people who are not members of a certain user group is difficult to control. This is known as the ‘exclusion problem’ of CPR. Secondly, the ‘subtractability problem’ argues that the exploitation by one user reduces the resource availability for others (Berkes, 2008).

Comparing the CBNRM paradigm with complex commons theory is a useful way to explain my theoretical framework and stance. Commons theory is able to look beyond the CBNRM paradigm towards the governance of CPR as complex systems (Berkes, 2006). CBNRM has received criticism from various scholars due to certain flawed assumptions. Shortly these assumptions range from the idea that both a distinct homogenous community exists (i.e.: the people of an ethnic origin or a certain administrative unit) and a relatively stable, yet degraded environment that can be restored sustainably through community participation and local management. The common argument of CBNRM is that local people used to live in harmony with the environment. However this balance has been disrupted due to factors such as overexploitation, undermining of traditional regulation and commercialization. Many CBNRM project and policy interventions by governments, NGO’s and international donors focus on a restoration of either traditional customary practices or modern ones such as environmental committees (Leach et al., 1999).

Though there may be value and to a certain extent empirical support for the CBNRM paradigm, I have chosen and argue for another theoretical framework with more accuracy. In contrast and as part of my theoretical starting point, commons scholars emphasize that local resource dependent communities as such are small-scale complex systems, which are not isolated from the rest of the

world. Thus the management of environmental resources cannot be simply reduced to interventions aimed at implementing community-based institutions. Berkes gives several relevant aspects to support this argument (2006). Firstly although a community can be defined as a spatial unit with a social structure based within shared norms and practices, there is significant complexity at the community level itself (Leach et al., 1999). This implies that ‘the community’ is inherently complex due to varied interests and values, heterogeneous characteristics among individuals, competing groups with different levels of power and social differentiation for instance in terms of income levels. Moreover communities embedded within a human dimension are also socially dynamic instead of fixed bounded wholes. Diverse individuals constantly and actively adapt and interact with internal and external conditions as well as influence and interpret the world around them. This continuous process leads to various norms and practices that may shift as a consequence of both intended and unintended actions. Path dependency may cause certain regular behavior to result in a diverse set of institutions and agreements, whereas other behavior has agency, spontaneity and may foster unexpected social change (Folke et al., 2005). This theoretical perspective on the nature of communities differs significantly from the CBNRM idea that communities are rather stable, but suddenly disrupted by exogenous developments (Leach et al., 1999).

Secondly various interrelated external drivers of change impact communities as they are embedded within a larger complex political, economic and social context. The Millenium Ecosystem Assessment defines drivers as: ‘A natural or human-induced factor that directly or indirectly causes change in a (eco)system’ (2003). Yet these drivers are not neutrally observed, but are partially socially constructed through subjective interpretation and discursive practices. Uncertainty is another aspect that is present due to the continuous agency of social actors and the complexity and unpredictability of the interrelated effects of drivers of change. Thirdly political and social institutional frameworks rarely fit ecosystem boundaries partly due to the intricacy of ecological dynamics. This is also related to the idea that commons scholars see the environment as inherently variable, dynamic and ridden with disturbance. This means that the threat of environmental degradation as is often quoted in the CBNRM paradigm, is perhaps a too simplistic tool of analysis. Instead the environment, ecological change and the condition of its natural resources are viewed as a result of cumulative social action. Human’s interaction with the environment through certain institutions can reproduce or negatively impact, but also transform ecological conditions and processes, while simultaneously the environment conditions human action. Environmental change is also path dependent, because social action accumulates over time, which means that past actions of former generations in relation to resources and the environment affect future possibilities (Leach et al., 1999). So human’s experience and their active relation to the local environment are historically conditioned, while continuously reconfigured on the ground and face-to-face through social interaction. From this dialectic and mutually dependent relationship between humans and the environment emerges the concept of social-ecological systems (SES), a concept that will be used in this particular research. SES refers to the integration of humans with their environment based upon interaction linkages and the fact that the boundary between social and ecological systems is rather artificial (Berkes and Folke, 1998). Finally there are multiple levels and scales influencing CPR termed as cross-scale issues (Berkes, 2008). The community level is but one level across vertical and horizontal scales of social and political organization such as the group ranch, the district commissioner, foreign direct investors and global external actors like a pharmaceutical company. The abovementioned factors and interrelated interactions emphasize that social-ecological systems and their natural resource base are essentially

complex adaptive systems. Thus governance of CPR inevitably implies having to deal with cross-scale social and political interaction, uncertainty, heterogeneity and sudden change (Folke et al., 2005).

Resilience and the theoretical principles of adaptive co-management

Out of the theoretical merging of commons governance scholarship with complex systems theory, the concept of multi-level governance emerged. Governance can be defined as the ‘structure and processes by which people in societies make decisions and share power’ (Folke et al. 2005, p444). I will make use of certain elements of the theoretical model of adaptive co-management, which is only one of the several institutional forms multi-level governance offers next to forms such as epistemic communities and polycentric networks. The theoretical philosophy behind adaptive co-management is partly based within resilience thinking and complex system dynamics.

Resilience within the natural sciences is defined as the capacity of a system to cope with disturbance and to facilitate a recovery or reorganization of the system while retaining its essential qualities in terms of function, structure and processes (Folke et al., 2005). Resilience stresses complex interaction across scales that can lead to sudden change to which a (social-ecological) system needs to reorganize and adapt itself to return to its initial condition. This has underscored the importance of shifting towards flexible forms of governance: the capacity of SES to find pathways for societal development while coping and responding to change and uncertainty due to unpredictable drivers such as climate variability and human social dynamics, instead of trying to control a ‘stable steady-state’ or aiming for a linear progression towards formulated policy objectives (Armitage, 2008). Armitage in ‘Governance and the commons in a multi-level world’ has formulated several features of adaptive, multi-level governance that are essentially normative principles (2008). These principles amongst others include participation and collaboration, accountability, knowledge pluralism, leadership, social learning and interaction, trust and networks that are structurally linked horizontally and vertically to social institutions and formal organizations across scales. I will use several of these principles to analyze my case study and inform policy recommendation. This means that I will not simply impose or use the entire framework of adaptive co-management. Instead I exclusively select the theoretical principles and insights that are relevant for a sound analysis of my case study.

The theoretical perspective of political ecology

Nevertheless, although these principles are insightful and valuable it is questionable how they can be effectively realized in practice. The author indeed acknowledges that commons theory needs to give theoretical attention to the varied and often complex, messy social relations, processes and changing conditions that impact if and how these principles are even realized in the first place. This implies that a sound analysis of the dynamic processes of internal and external contextual drivers is crucial to understand how these ultimately impact governance outcomes and collective action. According to Armitage, political ecology is herein a useful theoretical tool for analysis that has complemented the theory of CPR management for the past two decades (2008). Political ecology is indeed a valuable framework that will also prove relevant for the analysis of this particular research. Shortly, political ecology is an interdisciplinary approach that focuses on the interaction between local environmental issues and broader sociopolitical structures. It mostly aims to understand how socially and politically constructed practices and ideas determine access and power over resources, institutional processes, the positioning of social actors and economic mechanisms across geographic scales (Schubert, 2005).

Though the theoretical basis of political ecology is still developing, I like to discuss two relevant approaches. Firstly it aims to understand the discourses around environmental resources. This means that the political role of language in constructing our relation to the environment is critically assessed. It acknowledges that the environment is not an external condition. Instead the environment is socially constructed, reshaped and endogenous to human activity. An example is the ‘technological management of resources’ and the increasing commodification of ‘nature’s products and assets’ for pharmaceutical industries that are based within neoliberal thought (Escobar, 1996). This focus on discursive practices implies that the subjective interpretation of factors other than environmental drivers of change is also socially conditioned and value-driven. ‘Discursive relations and representational practices are constitutive of the very ways that nature is made available to forms of economic and political calculation and the ways in which our interventions in nature are socially organized’ (Neumann 2005, p47). Neumann’s quote indicates that representations, perception and construction of meaning by different social actors has real world implications for how policies and institutions such as land privatization are understood, realized and practiced. Secondly political ecology is directly associated with social justice and ethics. Any governance attempt is unlikely to be socially neutral or politically unaffected (Armitage, 2008). Political ecology underscores important challenges for commons governance in terms of who determines the ‘rules of the game’, which voices are silenced, who benefits and has access to information and assets as well as unfair negotiation processes due to existing social and economic inequalities. Ultimately it analyzes how social actors are deprived or become capable of using their rights referring to Amartya Sen’s capability approach (1999).

The abovementioned has advantageous implications for policymaking. On the one hand analyzing the management of CPR as a complex adaptive system related to resilience thinking can generate valuable principles and opens up the need for flexible and process orientated, rather than condition orientated governance. On the other hand a critical focus on discourse, rights and ethics, sociopolitical drivers of change as well as politicizing policy making by seeing it as an inherently social process that is dependent on different people with various institutionalized assumptions and interests, may contribute to new insights and improved results around commons governance. It is plausible that the key importance of hidden assumptions, underlying norms and interests within dominant mental models cannot be underestimated when it comes to enabling effective collective governance. Table 1 originates from ‘Governance and the commons in a multi-level world’ by Armitage (2008). It shows the theoretical interfaces between resilience based thinking and political ecology. Some of these focus points on complexity, power relations and unpredictability of the interaction between humans and the environment will be used for the analysis of my two case studies.

Points of Intersection	Resilience directs attention to...	Political ecology directs attention to...
Nested hierarchies and scales	Interactions of nested systems (holonarchy) Limited utility of single scale perspectives (or one hierarchical level)	Socio-political (institutional) and organizational levels and interactions, mediated through power relations Inter- and intra-scale dynamics of decision making (community vs. state; within community, etc.)

Multiple pathways and trajectories	System changes that may be unknowable and discontinuous, and involve sudden and dramatic flips – thus the possibility of multiple steady states in a given system Manner in which factors of multiple types and at multiple scales coalesce to shape system direction – often a function of chance and history	How socio-political, institutional, economic and ecological factors coalesce in unpredictable and unintended ways The significant role of historical conditions (human-ecological interactions and power relations) in current system trajectories
Self-organization	Complexity of living systems and manner in which they reorganize and/or adapt in the face of change (internal or external disturbance)	Understanding ways in which ecosystems and environmental systems shape and form self-organizing, often self-perpetuating power relationships and resource control at different scales
Importance of contextualization	Systems as integrated wholes whose properties are more than the sum of parts Emergence as neither foreseeable nor expected – emergent properties of systems can only be understood within the broader context in which they are enmeshed	Differentiated role of stakeholder groups and actors in the creation of knowledge, the legitimization of knowledge frameworks or ‘ways of knowing’, and representations of reality Embedding current system conditions in an historical ecological framework and an understanding of power relationships
Core themes	Unpredictability of nature-society interactions and the dynamics of scale that foster unpredictability	Power, power relationships and the mediation of power relationships across scales

Table 1 Interfaces between themes of resilience and political ecology (from: Armitage, 2008).

Multiple-institutional framework

Furthermore the normative principles of adaptive governance mainly imply the role of social dynamics through principles such as collaboration, leadership, learning and trust. Since the analysis of this research will be partly based upon the framework and theories around adaptive governance, it is necessary to acknowledge institutions and social dynamics and that they may play a key role in terms of livelihood sustenance and the governance of natural resources. Leach et al. critically scrutinize the CBNRM paradigm in their article on environmental entitlements stressing that both formal and informal institutions impact how, if and when social actors access and use CPR and how they consequently steer environmental dynamics (1999). Institutions are ‘regularized patterns of behavior of a particular group of people performed over time that emerge from underlying structures or rules in use which are constantly remade through people’s practices’ (Leach et al., 1999, p235). Formal institutions are rules that need exogenous enforcement by a third party organization, whereas informal institutions are internally upheld through a mutual agreement or social relations of authority, trust or custom. Informal institutions such as clan association and the simultaneous engagement of individuals in several institutions is crucial as they can provide assurance among social actors and possibilities for collective action through trust, communication and involvement. However, there are a number of factors complicating institutional practices such as local power relations, certain institutions may have different meaning to various individuals, institutions are inherently dynamic depending on changing social, political and environmental factors, many do not necessarily address a shared purpose and individuals’ views on the common good depends largely on their social identity and position. As such implementing a community organization as advocated by the CBNRM paradigm may not be sufficiently adequate to deal with the diversity of the multiple existing institutions that are associated with the sharing of environmental resources and the sustenance of the livelihoods of resource dependent communities (Leach et al., 1999). Instead of focusing on the community it could be more effective to strengthen or build a selection of institutions that are known

to support particular social actors in managing the local environment, for example women. Nevertheless, within this institutional framework the intricacy and ingenuity of informal organization is explicitly acknowledged. This highlights the fact that a designed intervention or development project assumes that a stable state or objective in environmental or social terms is feasible and desirable. As a consequence such interventions inevitably run the risk of a mismatch with the complex and sometimes well functioning dynamics of historically and culturally grown informal organization that is continuously changing.

The key importance of social capital

Analyzing a community case study from a multiple institutional framework necessarily includes the role of social capital. Raghav Kenana from Tenarco Investments for the development of skills and talents among marginalized youth in Kenya, stresses that resource management and climate variability are about building social relationships. The multiple-institutional framework also implies that SES' are not only upheld by formal regulation, authorities and legislation, but in fact through the construction of meaning, social relation and communication by interacting individuals across scales. Leach et al. argue that it could be more effective to facilitate negotiation and dialogue among different social actors instead of implementing an intervention agenda (1999). Indeed the social dimension behind governance such as social networks, leadership and trust as well as the strengthening or providing of a 'social glue' seem essential to foster reorganization or resilience to internal and external drivers of change and to adaptively respond to uncertainty without the need of eliminating all differences in values and opinions.

Theoretically speaking social capital can be conceptualized in the following ways. Firstly, learning, sense making and social memory are considered of key importance in the governance of complex SES and local natural resources. Learning entails that social actors are supported to learn from their experience and to build their competences and knowledge in order to deal adequately with changing conditions in their living environment. Sense making means that individuals are able to interpret these changing conditions in such a way that they enable themselves to adapt, reorganize, cooperate and act accordingly (Folke et al., 2005). Folke et al. also touch upon the concept of social memory. This refers to the accumulated experiences that individuals have with change and adaptation to the dynamics that are inherent within SES. This accumulated experience over time becomes part of institutional behavior such as informal collective practices or public decision making that deal with ongoing change and internal as well as external variables affecting SES. What matters is that two types of social actors are indispensable for activating social memory and for facilitating a reorganization of governance accordingly. These actors are categorized as 1) mavens who are altruistically orientated individuals who share their knowledge and skills as messengers and 2) connectors who are individuals with a large social network and who are able to spread a certain message to a diverse range of people. These informal institutions enacted by key social actors are regarded as fundamental for adaptive governance, because they are not limited by formal planning yet unrestricted to develop communal regulation, while making use of a plural local knowledge base consisting of different individuals through social interaction and communication. In addition not only individuals, but also actor groups or teams are of crucial importance for the maintenance of adaptive governance. External agencies, volunteers, political actors and outsiders such as social workers may bring in new ideas, experiences and contacts to nonlocal institutions and resources. Linking these different actor groups can on the one hand foster innovation and learning. On the other hand, it may

cause tension or undermine existing social capital due to conflicting worldviews, cultural values or exclusion from connection by powerful actors. Nevertheless these three aspects of social capital are considered pivotal, because governance and policymaking are no longer seen as fixed technical designs, but as ongoing learning processes that should be open to adaptation, collaboration and revision.

Secondly social sources of regulation and renewal through which individuals and organizations become connected at multiple levels are enabled through key leading persons (Folke et al., 2005). This means that effective leaders are crucial in connecting individuals and external organizations, mobilizing resources and support and in providing (a shared) vision, common understanding, direction and trust. Yet at the same time it must be noted that social actors have different levels of power, authority and ability to stand their ground and express their needs or views. Hence within any resource struggle it is important to support the empowerment (i.e.: leadership training, adult literacy, seminars) of those voices that are silenced or unable to make their claims against those who are in power (Leach et al., 1999).

Shortly despite the abovementioned social complexities, social capital in terms of trust-building dialogues, mobilization of social memory and learning, initiating a network of actor groups across scales and visionary leadership are all considered essential for adaptive governance that is responsive to change and uncertainty.

Empowerment theory

Post-development thinkers may criticize that the concepts of empowerment and participatory interventions are embedded within a predominantly Western knowledge framework and are part of a common NGO rhetoric (Desai, 2006). Nevertheless, taking the following definitions into consideration it becomes clear that empowerment may refer to social processes that are a fundamental part of developing a more equitable and sustainable world: ‘An intentional ongoing process centered in the local community, involving mutual respect, critical reflection, caring and group participation through which people lacking an equal share of valued resources gain greater access to and control over those resources’ (Perkins and Zimmerman 1995, p570). Or: ‘A process by which people sustain control over their livelihoods and participation in their community and a critical understanding of their socio-political environment (Zimmerman et al. 1992, p710).’ Both these definitions have been used as theoretical reference points for my research. In addition, the concept of interactional or communal empowerment has enriched my theoretical basis. Interactional empowerment stresses the importance of how social actors meaningfully interpret, critically understand and relate to interrelated drivers of change that shape and impact their living environment and conditions (Speer, 2000). It also highlights whether individuals perceive themselves as having the knowledge and the resources to ensure decision power over their own livelihoods and whether they experience the capability to choose and live the lives they have reason to value (Desai, 2006 and Sen, 1999). This is particularly relevant, because many larger systemic mechanisms for example the trickling down of harmful environmental effects may cause powerlessness and negative impacts on the lives of numerous individuals.

The abovementioned three approaches to empowerment are insightful, but should be categorized. Though the distinctions between the following four categories of empowerment could be considered artificial and sometimes overlapping, it is necessary to distinguish them for theoretical clarity:

1. Intrapersonal empowerment is individual orientated and focuses on a personal sense of competences, socioeconomic opportunities and individual capabilities (Speer, 2000). Thus having the capability to decide over one's own livelihood and to be able to live the life that is meaningful to a certain individual is part of intrapersonal empowerment.
2. Instrumental empowerment entails effective action through individual participation and engagement within a larger social unit such as a community or organization. Thus gaining more access and control over certain resources or assets through participation is a form of instrumental empowerment.
3. Formal or structural empowerment is similar to interactional empowerment as it consists of the ability of an individual or group of people to critically understand the macro sociopolitical environment and to mediate their needs or act upon their rights accordingly so as to reduce psychological or social distress, improve their livelihood or enable structural long-term social change.
4. Community empowerment implies to what extent a group of individuals within a spatial unit sharing a social structure of norms and practices, is capable of organizing and regulating itself including mobilization for collective action when required. It is related to whether and how social actors cooperate with others to improve the quality of life at a community level (Speer, 2000).

In addition, empowerment is also related to more anthropological narratives of cultural meaning, self-esteem and a sense of individual and communal autonomy that are an integral part of agro-pastoral livelihoods and the land upon which they work and live. Cultural meaning is related to subjective values and to how individuals think about themselves. Defining empowerment in terms of values is another way to conceptualize the term. Thus three theoretical levels can be distinguished in terms of empowerment. Those are values, processes and outcomes (Perkins and Zimmerman, 1995). Empowerment values are for example self-esteem, cultural honor and reciprocity. In terms of processes, empowerment can be seen as knowledge and capacity building, educational development or political participation. Resulting outcomes of empowerment processes could be mostly related to institutional social capital such as youth organizations, to assets or entitlements such as formal employment, political rights or public healthcare or on its turn to empowerment values such as mutual respect and social cohesion. Awareness and inclusion of these different perceived dimensions and contextual realities of empowerment are fundamental in terms of understanding structural long-term social change.

3 RESEARCH QUESTIONS AND RESEARCH OBJECTIVES

3.1. RESEARCH PROBLEM

In this particular research climate variability was taken as a contextual starting point; an external driver of change that is associated with environmental issues particularly in terms of vegetation degradation leading to a possible long-term decrease and drying of rangeland productivity. Agro-pastoralist communities such as the Maasai living in Enkutoto's Group Ranch in Narok county, Southern Kenya are faced with such climate related risks (e.g.: drought and loss of pasture and sufficient agricultural output). Current responses to climate variability by governments, NGOs and international organizations are largely top down within a discourse that is focused on marketization and efficiency neglecting a more subtle awareness of local views, existing knowledge, customary practices and the need for cooperative synergy between experts and lay people (CoCoon proposal, 2013).

In addition a number of other complex issues and knowledge gaps are present. Firstly, resource struggles over pastures, farm land and water within an increasingly risk prone environment could increase. At the same time, climate variability may also foster renewed solidarity and communal cooperation. It must be emphasized that the potential negative effects of climate variability are highly interdependent with and are likely to worsen due to several other factors. Changing institutional settings related to unequal processes around land privatization, corrupt leadership and modern politics, changing livelihoods in terms of agricultural and natural resource development and sociocultural changes as a result of formal education and neoliberal encroachment are affecting the Maasai living in Enkutoto. It can hardly be overseen what the consequences will be of the complex interplay between such drivers of change.

It thus seems of critical importance to develop a practice and theory based understanding of the social dynamics behind cooperation, appropriate natural resource management of common pools and insight on the future direction for agro-pastoral livelihoods against the backdrop of a changing climate, institutional and political transformations and interrelated sociocultural developments. These issues ultimately stir questions around how to bring about systemic social change that fosters equal access to common pools and capabilities as well as tackling local power relations that undermine the long-term sustainable empowerment of indigenous people. On the basis of the abovementioned issues, I decided to focus on a research problem that aims to deal with the level of intra-cooperation and participation within two Maasai communities mostly in terms of the governance of CPR and in relation to the sustenance of their daily livelihoods that are closely connected to common pools. In addition, the subjective experience of four aspects of empowerment will be researched; firstly because participation is essentially a part of empowerment. Secondly, empowerment is a highly relevant issue that should not be disregarded, because the governance of CPR is invariably connected and impacted by political, economic and sociocultural drivers of change that highlight questions around access, power and critical awareness. I have explicitly focused on these themes on an individual (i.e.: personal) and community level (i.e.: per case study village), excluding household/family levels.

3.2. RESEARCH QUESTIONS AND OBJECTIVES

Main research question

How do the agro-pastoralists of Ilkimate and Iloshoron, two villages located in Maasailand, Southern Kenya perceive their individual and collective level of empowerment, intra-cooperation and participation in terms of regulation and access of common pool resources and in terms of sustaining their daily livelihoods within the context of a changing social-ecological system?

Contextual sub-questions

1. When and how did Enkutoto sublocation as part of Narok county, Southern Kenya become a group ranch?
2. What are the geographic and topographic characteristics of Enkutoto sublocation over how many square kilometers (i.e.: how many villages, natural water resources and type of landscape)?
3. How many inhabitants and households are approximately living in Ilkimate and Iloshoron as well as registered men?

Key sub-questions

1. What feelings and perceptions do agro-pastoralists [living in Ilkimate and Iloshoron located in Maasailand, Kenya] have regarding intra-community cooperation mainly in terms of sustaining their daily livelihoods and in terms of the local use and governance of common pool resources?
2. How do agro-pastoralists [living in Ilkimate and Iloshoron located in Maasailand, Kenya] view and experience their degree of internal participation and inclusion mainly in terms of the local use and governance of common pool resources?
3. What do different forms of empowerment (i.e.: intrapersonal, instrumental, formal and community) mean to agro-pastoralists [living in Ilkimate and Iloshoron, located in Maasailand, Kenya] and how do they perceive their level of empowerment in terms of having the capability to lead the lives they have reason to value?
4. How do agro-pastoralists [living in Ilkimate and Iloshoron located in Maasailand, Kenya] experience and interpret the effect of the current interrelated sociocultural, economic and political changes on their level of intra-cooperation, participation and sense of empowerment while sustaining their livelihoods as Maasai's?

Research objectives

- i. The main research objective is to broaden understanding and knowledge about how different individual social actors from two Maasai villages, within the context of a changing social-ecological system subjectively view the different dimensions of:
 1. Intra-cooperation on a personal basis and on a village-wide level in terms of the local use and governance of common pool resources to sustain their daily livelihoods.
 2. Participation and inclusion within the community (i.e.: per case study village) mostly in terms of the local use and governance of common pool resources.

3. Individual and collective empowerment processes.
 - ii. The second research objective is to analyze experiences and perceived levels of intra-cooperation and empowerment (with participation as part of empowerment) on a meta-level through the use of commons theory combined with complex system dynamics, political ecology and empowerment theory. As such the aim is to contribute to the question of what is needed in terms of policymaking to support a fair and effective governance of CPR that is at the same time adaptive to a changing social-ecological system.
 - iii. In addition, it is also important to determine how levels of intra-cooperation, perceived empowerment and participation are interrelated; could be strengthened and possibly inform long-term systemic social change.
 - iv. Action research: inform ILEPA (CBO) about the main research findings. This could provide an avenue for lobbying, policy formulation, awareness building and possibly a future project intervention at Enkutoto initiated and monitored by ILEPA.

4 RESEARCH DESIGN AND METHODOLOGY

4.1. METHODOLOGY

The methodological approach of this research started from two case studies of Maasai villages located in Enkutoto group ranch as part of Narok county, Southern Kenya. I have taken the perspective of phenomenological interpretivism implying that complex social phenomena such as cooperation and community dynamics should be studied differently than the objects of natural science. An acknowledgment as well as focus is given to the qualitative value of subjective meaning and interpretation of the research subjects involved. My research is not explicitly postmodern, yet critical change criteria are underlying the topic of empowerment in the sense that this research aims to build understanding and knowledge to inform possible courses of action, long-term projects and policy formulation in favour of the rights and needs of indigenous Maasai.

The qualitative and participatory research method

I have focused on developing an in depth understanding of local realities and meanings attached to interrelated economic, environmental and cultural phenomena. As such through qualitative research local narratives and perceptions of the affected people are brought to the foreground (Smucker et al., 2007).

In addition it can be argued that participatory research is beneficial for several reasons. Firstly it can engage affected people in an interactive learning process wherein they first and foremost are given opportunity to frame their own issues and ideas for action. The active engagement of local indigenous people seems crucial, because it is assumed that involvement has more potential to foster commitment and context specific solutions (Mikkelsen, 2005). This means that participation can enrich the quality of understanding and information produced which on its turn can improve one-size-fits-all policies and interventions by making them more contextualized. Participatory feedback and evaluation can also foster more understanding, awareness and as such better informed action and priorities towards necessary social change (Smucker et al., 2007). Secondly, participation is also part of an ethical stance when it comes to doing research wherein trust, respect, social usefulness and relevance as well as consequent feedback are seen as fundamental. Furthermore, it is also a conscious choice and advocacy against ethnocentrism and the hegemony of Western values by opening up and recording the diverse voices and experiences of local people as part of the qualitative, meaningful dimensions attached to life (Desai, 2006). This is also related to the idea of epistemic justice and to the crucial relevance of developing and documenting knowledge frameworks that can be different from the Western discourse as has been explained in the theoretical framework.

Nevertheless despite its many pro's, in hindsight it should be stated that participatory research poses significant challenges and as such requires experience and expertise from the researcher's side. Though a more in depth reflection will be given in the final research report, it can already be said that power relations and political allies on the community level, being a cultural outsider, time constraints and the practical question of how to take action under who's responsibility while having to unite diverging opinions may all hamper effective participatory research.

4.2. SAMPLING AND DATA COLLECTION METHODS

Sampling methods

I have selected two Maasai villages as case studies based upon a purposive sampling strategy. This means that these villages were selected due to their practical availability and the information as well as access given by the local host organization ILEPA. Within the case study/village itself systematic random sampling of households was used to interview an approximately equal number of males and females ranging from the age of 21-75 years old. I consciously chose to include both sexes in order to capture a range of perceptions and voices. I have also selected key informants such as village leaders, group ranch members, environmental committee members and elders.

For the participatory research methods, I have personally invited certain interviewees, snowball sampling was also used and for one of the focus group discussions, the Enkutoto sublocation chief was the one who initiated a group of participants.

Specific research methods

I have used mixed methods in the following sequence, in order to compare results and possibly gain a more complete analysis of the different issues at stake:

- i. **Secondary literature research** to gain an overview of the complexity and issues that are already specified in the scientific literature and to define the theoretical framework of analysis.
- ii. **Informal interviews with key informants** - local researchers, activists and associates with organizations such as ILEPA to openly explore research possibilities in terms of the area, specific communities and their experience and knowledge regarding the challenges around climate variability and specifically the theme of empowerment and underlying issues related to participation and cooperation.
- iii. **Semi-structured open interviews** with household members of both Ilkimate and Iloshoron around the experiences, perceptions and needs regarding the themes of empowerment, intra-community participation as well as individual and collective cooperation in terms of natural resource use and sustaining their livelihoods within the context of climate variability.
- iv. **Focus group discussion** an interactive learning process carried out with 15 participants (male and female) mostly educated and authoritative community members such as the sublocation chief and secondary school graduates from Iloshoron.
- v. **Preliminary participatory feedback workshop** a meeting with approximately 20 attendants from both Iloshoron and Ilkimate and participants of the former focus group discussion. A presentation from the researcher on the key preliminary findings and a short feedback was given afterwards.
- vi. **Appreciative Inquiry workshop** a workshop based on three identified key issues found according to the abovementioned research methods: 1) forms of cooperation to cope with drought and increase of climate awareness among all community members 2) Strengthening of community fostering values such as respect, solidarity and fair leadership including the sustenance of certain Maasai traditions between young and older

generations as part of empowerment. 3) Political voice and access to modern forms of governance to address immediate pressing needs such as roads, water catchment areas, healthcare and education. The participants were divided into three groups with at least one literate person to make notes. Each group was assigned to apply the Appreciative Inquiry method to one of the three key issues. Afterwards each group shared its results and main insights with one another in the larger group.

- vii. **Informal interviews with key informants** - local supervisor, activists and educated Maasai youth associated with ILEPA to evaluate, consult and exchange ideas and experiences.
- viii. **Semi-structured open interviews** with household members of both Ilkimate and Iloshoron to sequence information generated from the abovementioned research methods and to broaden understanding of issues requiring more elaboration.
- ix. **Focus group discussion** an interactive learning process carried out with 7 female participants from both case study villages and of mixed age groups to discuss certain topics with one another.
- x. **Direct and participant observation** during all the abovementioned research methods (participation in daily life, attending traditional ceremonies, informal conversation and interaction).

5 KEY RESEARCH FINDINGS AND DESCRIPTIVE ANALYSIS

The following key research findings are based upon a total number of 52 qualitative semi-structured open interviews of which 9 were key informants. Four participatory methods have also been used: 2 focus group discussions of which one was exclusively meant for women coming from both villages, an Appreciative Inquiry workshop and a preliminary participatory feedback session. Most interviews have been conducted with young males (21 – 30 years), middle-aged men and women (30 – 60 years) as well as elder men and women (+ 60 years). Due to time limits I had to decide to focus on these groups excluding most young females, also because of two rather short interviews resulting in relatively little data.

5.1. KEY RESEARCH FINDINGS AND GENERAL TRENDS FOR CASE STUDY ONE: ILKIMATE [ENKUTOTO GROUP RANCH, KENYA]

Drought and water scarcity as one of the main issues of concern

1. One of the main external drivers of change experienced by almost all respondents and participants in both villages affecting the quantity and quality of common pool resources are: drought and water scarcity. The loss of pasture and the little water availability for farming are experienced as one of the main challenges in terms of livelihood sustenance. It is remarkable that the majority of Ilkimate's respondents perceive other community members as unaware of climate changes and as rather ignorant or passive about drought. Yet when individual respondents are directly asked it appears that almost all of them are aware of water scarcity, the changing rainfall patterns and the risk of long-term drought. One of the reasons why this gap exists between what individuals know and what is generally perceived about others may be due to the fact that there is no communal long-term strategy developed by leaders such as official village chiefs, nor individual social actors have come together to devise a possible plan of action. Thus though there is indeed awareness, self-organization and intra-cooperation in terms of acting towards collective drought preparedness is not effectively present in Ilkimate.

Experienced levels of intra-cooperation in the governance of common pool resources

2. Intra-cooperation and community organization mainly in terms of the management of common pool resources such as land, water and forest are present in Ilkimate, but not without significant complications. Nowadays the management of common pool resources is mostly formally governed through registered committees. Most respondents view the water committee as functioning improperly (e.g.: favoring relatives or rich people, open to bribery, double-dealing with allocation of irrigation dates, serving female farmers last). Participation in the committee is currently even reserved for (young) adult men, excluding the elders in the village from partaking as it is now 'their time to lead'. According to several respondents this attitude is due to the fact that there is a general eagerness, especially among young males interested in farming to control and monopolize water resources, as they are fundamental for sustaining and improving their livelihoods. Yet views about how well the committee functions are not entirely uniform. Especially elder women who are not engaged in farming, relatives of members of the water committee, one member himself and one group ranch official argue that the committee is

regulated well and aims to serve everyone equally. Intra-cooperation has also decreased significantly especially with regards to managing the communal land for pastoralism. For instance past customary regulations and public meetings for ‘Olokere’³ or ‘Letung’*anat*, setting aside certain hills for regeneration of pasture are no longer active. The direct cause for this is an elder male who approximately ten years ago, decided to fence a large piece of land to make his private ‘Olokere’ causing others to do the same. Yet the actual deeper root cause may be due to many interrelated and interdependent factors such as a preference for farming and business by the younger male generation with as a consequence less common interest and priority to manage land communally, no presence of authoritative elders, growing private interests and individualistic attitudes as well as a general decrease of respect to older age-sets leading to more disobedience of communal agreements. However the forest and the illegal cutting of trees are managed quite effectively through a formal environmental committee and informal monitoring based upon a common awareness around the exploitation of timber.

3. Intra-cooperation is still common in the form of assisting each other during cultural ceremonies and communal fundraising. However with respect to the basics of life, this means in terms of daily livelihood sustenance and ensuring an income mainly through the management of livestock and private farming, people have individualized mostly per household. In addition, the vast majority of respondents (with exception of only two) do not experience or perceive intra-cooperation to be high, possibly due to two factors. Firstly, on a daily basis everybody works first and foremost for one’s own household. This is very different from how people used to sustain their livelihoods ten to fifteen years ago. Intra-cooperation in managing the livestock with the entire homestead was common and social dynamics were communally orientated. Food for instance was shared among the entire homestead and people were mostly concerned with how to deal with one another. Secondly and most importantly, increasing individualistic attitudes, competition and a loss of social trust (e.g.: jealousy between households) may have affected how people subjectively interpret the current level of intra-cooperation. It can be argued that the abovementioned change in sociocultural mindset is again due to a complex set of interdependent factors. Political division and corruption, the diversification of daily occupations and tasks, the separation of homesteads, the decrease of the level of informal education as well as the impact of and struggle for modernization for instance in terms of increasing personal welfare, generating finance to ensure children’s access to formal education and securing private (farm) land, have impacted the level of perceived social cohesion and sense of community.

Experienced levels and subjective interpretation of four aspects of empowerment

4. In terms of intrapersonal empowerment: most respondents view pastoralism and farming, as culturally and economically meaningful livelihood occupations. However the formal education of their children in order to have the opportunity to choose another livelihood is uniformly perceived as essential among respondents and participants. Only two or three elders do not view formal education as a form of empowerment due to the devaluation of informal education and the lack of teaching inner morals and how to behave to others. Formal education may give knowledge and skills, yet it is also generally agreed upon that informal education is less

³This used to be a communal informal custom that reserves certain pastures for calves and young goats. No other cattle are allowed to graze at such sites to ensure that young animals do not have to migrate too far for grazing.

practiced partly leading to a decrease in respect from younger to elder age-sets. In fact, both male and female middle-aged and elder respondents perceive the level of respect and discipline among young adolescents to older age-sets as low and several examples of rude behavior have been told independently. However voices and self-perceptions are indeed plural. The younger generation mostly males from 21 – 35 years old are seen as less interested in pastoralism. Yet they themselves counter argue that they are in fact more hardworking and interested in livestock as they no longer view this as a way to secure food or dowry only, but as a means to support education, to invest in town and to secure better housing. They are also looking forward to livelihood diversification through farming and business. Yet most of them still value customs such as mutual respect, willingness to assist and communal living, which are seen as part of socially empowered behavior. At the same time young male adolescents, including some middle-aged respondents also view it as positive to change or discard certain traditions that seem outdated.

5. Instrumental empowerment used to be reserved in the past for those who were part of the council of elders. Thirty to forty years ago leaders were respected elders chosen for their character, personal history and family record. These elder men possessed the highest authority of decision-making within the community including the regulation of common pools such as grazing sites. Currently elder males such as fathers or grandfathers within the household are still generally endowed with first and final authority. However, elders in Ilkimate no longer fulfill any particular leadership position. In addition, status and as such ability to speak up is mostly enjoyed either by rich male individuals or elder males. It is not common for most individuals to voice their needs. Instead all respondents agree that one needs to work with a group or an association to address a certain issue. Otherwise people may think an individual only aims to address a personal issue and most respondents agree that consequently people will be less willing to engage. Literacy and English language skills are also viewed as fostering instrumental empowerment in order to engage with foreign organizations such as World Vision. Respondents feel that they are mostly unable to participate and engage with such external organizations and that they largely depend upon official chiefs and counselors to negotiate and inform the larger community.

Women could be considered particularly ‘vulnerable’ to remain unheard or silenced. There are inevitably differences between various individual women, yet mostly middle-aged and elder women are well aware of their position in terms of them still not being allowed to voice their opinion too strongly in front of men and in having no say in crucial matters such as the allocation of water for irrigation and land privatization knowing that they will be regarded as disobedient if they do so. They also experience themselves as having little influence over owning or selling resources of the household such as cattle or being regarded as inferior even by younger males. Nevertheless, their participation and position within the community is more present than before. Women are included in Enkutoto’s environmental committee mostly to regulate the forest and local men supported them to mobilize themselves in a successful women’s demonstration against timber exploitation. Solidarity is also still present and organized in the form of ‘Otururuu’. Mainly women are leading and engaged in managing this type of ‘communal insurance or fund’ to finance public facilities such as school buildings and to

support less fortunate women in the community such as widows or women and children neglected by a polygamous husband favoring other wives.

6. The level of perceived formal or structural empowerment requires subtle analysis. Respondents critically understand the processes behind ongoing drivers of change like formal institutional regulation such as modern politics and land privatization. In the past people were not divided through such thing as ‘politics’ and public speaking tended to be a form of informal education instead of persuasion as one middle-aged female respondent argues. It is also generally known that corrupt leadership, private grabbing of revenues and the lack of disclosing information happens at higher institutional levels such as the group ranch or within the county. Yet few feel empowered in the sense that they know how to mediate their rights or actively and constructively combat such sociopolitical issues other than through a general remark or idea of ‘initiating meetings’. Authoritative males such as the village chief and young educated males commonly know about pressing issues (e.g.: corrupt sociopolitical processes, water scarcity and increasing individualism and competition amongst others over farm land) and may sometimes even take part in aggravating them. However out of the focus group discussion it appears that though they are aware and know, the daunting question remains: ‘How to take action or what to do about it?’

Sense making of the changing sociopolitical environment like land privatization is highly plural and diverse. As such it is difficult to group respondents. Ideas like ‘unequal allocation of land’, ‘the need for economic security and to build a house’, ‘conflict may decrease as everyone owns his part by formal subdivision’, ‘pastoralism is part of the culture and selling land is not a traditional custom and is neither allowed by the Bible’, ‘restriction of livestock mobility is a disadvantage’, ‘a reduction of livestock numbers because of privatization is beneficial’, ‘misuse of common pool resources may decrease of for example paid herds-boys coming from town with bulls from outsiders to graze freely’, all influence how different respondents view a structural sociopolitical change like land privatization. Social-cultural and economic developments such as education, the church, technology and farming are generally interpreted as positive and empowering as they are seen as contributing to a better quality of life. Resistance or rejection against these drivers of change is low, most respondents including elders find it necessary to develop as the world around them is changing too or simply see it as inevitable that they have to take part in these sociocultural, political and economic changes.

7. In terms of community empowerment, the willingness to learn, to be assisted by external organizations and to receive capacity building (i.e.: training, seminars) is high among all respondents and participants. Besides awareness exists around pressing issues and common needs such as conservancy of the forest, challenges of drought, healthcare and the need for educational facilities. However, community self-organization is considered to be low in the sense that there are no proactive individuals like elders making their claim as one voice for the entire community, other community members are mostly generalized by individual respondents as ‘passive’ or ‘uninformed’ and leadership by official (village) chiefs is perceived as rather dormant. At least in the perception of most respondents public meetings are not regularly organized and leadership that unifies under a shared vision or collective strategy is not present, even though the location chief views himself as giving sufficient ‘barrasas’.

5.2. KEY RESEARCH FINDINGS AND GENERAL TRENDS FOR CASE STUDY TWO: ILOSHORON [ENKUTOTO GROUP RANCH, KENYA]

Experienced levels of intra-cooperation in the governance of common pool resources

1. Intra-cooperation and community organization both in terms of the management of common pool resources (land and water) and in terms of daily affairs and regulation within the village is experienced as high. According to twenty out of twenty-one respondents, the water committee to manage irrigation and livestock keeping is functioning fairly and adequately in Iloshoron with community members cooperating to make irrigation canals and water catchment areas. Young males together with elder women manage the upper and lower region of the river on a daily basis. In case of conflict, the elders within the committee are consulted. Women were included for several reasons; one of them was to represent the interests of female farmers. In contrast to Ilkimate, informal customary land agreements are also still active. Olokere is checked regularly through the cooperative maintenance of young males and elders as others (also from Ilkimate) especially during dry seasons may break this communal regulation by entering the grazing site. Other communal agreements such as the prohibition of fencing of land are also observed. Yet perceptions are hardly ever entirely uniform. Even though Olokere is active, probably compared to one or two decades ago Olokere is now less of a main common concern. One middle-aged woman stresses that nowadays schooling, farming, going to the market and meetings have replaced the prominence of Olokere for the sustenance of livestock and that the younger generation is disinterested to regulate communal land well. Moreover one key social actor, Ole Seneyo an elder who has unequivocal informal authority within the village, argues that: ‘We as elders like our grandfathers did when we were young, still look at our environment in communal principles: Is there sufficient water for everyone’s needs, when will we allow migration to which hills, do we combine our cattle to go into the forest? Yet the younger generation tends to look to the environment in terms of money: how to own more fertile land or use resources for financial profit.’
2. Eighteen out of twenty-one respondents was of the opinion that the village is united and that they share a strong bond on a daily basis, also among elders who are bringing the people together. Homesteads like in Ilkimate have separated either into individual households or several households per polygamous male. However, there is intra-cooperation, social assurance and interdependency on a daily basis mostly on a community, village-wide level or on a personal level (i.e.: not between autonomous households). For instance when asking other men to assist you in the farm, it is guaranteed that you will be helped or when a cow is lost young males will help searching the entire day and even night until the animal is found. Also the entire village may decide in one step to go together to graze at certain hills only. Inevitably there can be tension between individuals or disagreement within the homestead between co-wives, but this does not concern or disrupt the general social dynamics of the entire community as such according to several respondents. Though collective action and communal cooperation are an integral part of daily life in Iloshoron it is different from strong intra-cooperation practices such as ‘lingaa’ in the past. In direct economic terms

households consisting of one married woman either entirely manage on their own, rely upon their husband or one polygamous man takes care of the several households that belong to him. As such there is also a trend of the development of individualized businesses or investments among community members. Besides one male respondent is struggling. He is of the opinion that in Iloshoron a better representation of the poor is needed and those who are wealthy in terms of large farms should no longer confiscate the water, but cooperate more with those who own smaller farms.

Experienced levels and subjective interpretation of four aspects of empowerment

3. Intrapersonal empowerment is in certain aspects experienced similarly as in Ilkimate: livestock and farming are still appreciated for economic and cultural reasons, partly also because lack of literacy makes several respondents feel incapable of finding any other option for livelihood sustenance. As such formal education is generally highly esteemed and always mentioned as a form of intrapersonal empowerment. Views also exist that children may become educated, political voices for the community and will come back to take leadership positions or advocate for their needs. Especially in comparison to informal education, except for elderly not one single respondent has directly interpreted this as a form of intrapersonal empowerment when asked how to enable themselves to lead the lives they value or find meaningful. Nevertheless, though it may be part of an intention to give a socially desirable answer, Nick Kokai who is a member of Enkutoto's Group Ranch stresses that: 'Even though we need to become educated to decrease ignorance and illiteracy, we also need to stay close to the norms of our elders and certain cultural practices like wedding ceremonies and boys' circumcision.' In addition, in Iloshoron it is common practice that elder men instruct younger males to always pay respect to 'Orpiron' and to those who are in age above their particular 'Orpiron'. 'Orpiron' are men of one age-set who support an approximately twenty-five years younger age-set in several important rites of passages such as during circumcision and boys' Moranisem ('Olamal Loolayok'). It is a likely that as a social consequence of this custom, the level of respect as part of intra- and actually interpersonal competence from younger to older age-sets is still experienced as high in Iloshoron. Mostly elders and anyone of 35 years and above (female and male) are favored with a certain level of respect. For instance in case one disagrees with an individual who is older, it is appropriate to ask someone else instead who is part of the same (older) age-set to talk to this particular person.

4. Instrumental empowerment in terms of individual participation, standing your ground and voicing opinions and needs is first and foremost reserved for particular males and elders who are considered to be trustworthy and responsible within the community. This means that not everyone's ideas are readily accepted. It depends on an individual's public image as being respected and reliable, regardless of wealth. That is at least what a number of respondents claim to be the case: 'In Iloshoron we do not discriminate those who are poor by always accepting the ideas of those who are rich.' The social function of these respected individuals is to maintain peace by acting as mediators in conflict resolution and by implementing informal communal regulations. Ole Seneyo is considered to be an elder and he is a key social actor in Iloshoron. He enjoys a high level of respect and authority as he is generally seen as a man of understanding who upholds strict maintenance through the traditional

punishment of (effective) cursing. In case he makes a decision, nobody can disagree. He is also the only one who proactively engages with other elders to discuss communal issues through the social custom of Ole'ngotti.

In addition, female respondents in Iloshoron feel that they are allowed to express their views when it comes to the water and school committee's. Nowadays they are seen as the caretakers of the formal education of children as they have traditionally been associated with the upbringing of children. However they are not included in terms of communal land regulation and current processes of land privatization. Yet times are changing. All participants in the focus group discussion are rather critically aware and self-reflective about women's issues and their position and level of inclusion within society. Firstly, they argue that any person with a good idea that is beneficial to the whole community can be listened to in Iloshoron, though young males and women need to cooperate with others. It is not necessarily appropriate for them to speak up or engage as individuals. Secondly, nowadays women can also assist in harvesting to earn food, they can manage farms or small businesses, which is a source of self-esteem as it enables them to contribute and participate in fundraising autonomously. Lastly, it is perceived as an improvement that the current political constitution demands the election of 'Mamawakiiki's' (a village headwoman working together with a village headman). Moreover they know that there is a women's representative in parliament so they would like to elect a female county assembly representative. However an acknowledged drawback is that husbands usually decide whom they will vote for.

5. Formal or structural empowerment like in Ilkimate is present in the sense that respondents and participants are generally aware of political dishonesty and corruption. It is common knowledge as the women from a focus group discussion (including both villagers from Iloshoron and Ilkimate) argue that the group ranch can decide on an issue and just claim that the entire community has agreed. Also practices happen without them being informed such as a foreigner confiscating many acres of land while privately paying a group ranch member. Moreover official chiefs are neither elected by the community, but simply appointed by the government. Though critical awareness exists, like in Ilkimate structural empowerment is less when it comes to feeling that they have the ability to take action or to organize themselves with others. Thus the commitment and capacity to proactively foster social justice and change within their sociopolitical environment is generally not felt. The shift towards modern politics has also decreased transparency in the sense that in the past the informal governance of the council of elders was always openly discussed through 'Ole'ngotti'. However elders' governance also included what is now considered to be harmful traditions like signing up young men for raiding cattle and consequently many of them were injured or killed. A number of respondents also argue that official leadership of the government through appointed chiefs has nowadays brought advantages like contacts with external organizations to build a clinic and small scholarships. Yet sense making and perception of these modern influences is not always accurate: women participating in the focus group discussion appreciate the benefits of modern government and politics, because it has brought technological commodities such as mobile telephones.

Developments like education and the advance of technology are generally understood and experienced as increasing individuals' wellbeing. In fact, these changes are mostly seen as positive and for one young educated male they are even perceived as necessary: 'Religion teaches morals, education gives us knowledge and traditions like Moranisem are of the past; it is a waste of time and resources.' Moreover livelihood diversification and farming are seen as valuable developments in the face of increasing precipitation variability. For elders it may be different: they are generally perceived by younger age-sets as 'to them life is simply about livestock' and 'they know nothing about alternatives like farming or business'. However perception can be misleading, as some who are considered elders engage in farming themselves and they cannot deny the benefit of such changes nor do they want to be left behind when privatizing. At the same time, Ole Seneyo does regard many modern changes as 'eating faeces' in terms of culture and communal solidarity, but one still has 'to eat' according to what is available. This implies that one cannot do otherwise than adapt to changing conditions and make the best out of it.

6. The majority of the respondents perceive the level of community empowerment as significant. It can be argued that this is mainly due to three interrelated conditions. Firstly, a relatively high level of social capital and informal institutions contribute to community empowerment, such as the custom especially among males of spontaneously and naturally meeting and interacting with each other without fixed times or days. The social dynamics of living communally implies that: 'we are often in contact and whether we like it or not, we simply come across each other: this brings understanding and closeness.' As such three to four men may come together, sit and discuss, combine ideas and experiences to inform each homestead about agreements that affect the entire village. In case there are people who disagree: they are the ones who will call for a public meeting to come to a compromise or in case the majority disagrees, the policy will be discarded. At the same time one middle-aged female respondent still holds the view that people are reluctant to be proactive and that chiefs do not call enough for public meetings. Secondly, another factor seems crucial when it comes to maintaining or strengthening the level of community empowerment. The presence of a few key actors like an authoritative elder or an adult male who is seen as trustworthy can be an essential 'social glue', in case they generally serve commonly felt issues and collective interests while providing leadership that is based upon a shared vision. Finally the level of respect and obedience from younger to older age-sets facilitates and upholds the effectiveness of such leadership advocated by key social actors.

6 PRELIMINARY THEORETICAL DISCUSSION

The following *preliminary* analysis of some of the main research findings is based upon the theoretical framework of commons governance combined with complex system dynamics (i.e.: mostly related to resilience based thinking). This theoretical framework is used in order to deepen understanding and to prevent an invalid extrapolation or presumptive interpretation at face value of the main research findings. Within given time constraints this interim report aims to give as much as possible a theoretically rich analysis. However, certain aspects and research findings will not be dealt with in this initial report. A more elaborate description and subtle theoretical analysis will have to be reserved for the final research report.

6.1. THE ANALYSIS OF ILKIMATE AND ILOSHORON AS COMPLEX ADAPTIVE SOCIAL-ECOLOGICAL SYSTEMS

The two case studies of the villages of Ilkimate and Iloshoron as part of Enkutoto Group Ranch, Southern Kenya can be analyzed through the following theoretical notions that are present within contemporary commons theory. First of all it can be argued that both case studies are essentially small-scale complex adaptive social-ecological systems (Berkes, 2006). Analyzed from this particular perspective it becomes clear that despite notable differences between the two villages, complexity, heterogeneity and adaptation to changing circumstances are part and partial of the social dynamics of both case studies. For instance the functioning of the management of a common pool water resource such as rivers in Ilkimate, appears to be conditioned by elder and male adolescent interaction influenced by changing social-cultural attitudes and interests which on their turn are interrelated with the advance of modernization processes and decreasing water availability. Besides compared to Iloshoron's water committee this is likely to be only one complex aspect among other factors that impact the functioning of Ilkimate's committee such as whether women are included or not and to what extent community empowerment is experienced in the village. Furthermore, human individuals are essentially adaptive and constantly influencing the world around them through their agency leading to new practices and institutions that impact community dynamics. Examples of both case studies are informal monitoring to prevent the exploitation of trees for timber, a general willingness to reevaluate certain customs while at the same time preserving certain values and the invention of new cooperative agreements such as 'Enkuyatia'⁴ while other cooperative forms may disappear such as 'Olokere' in Ilkimate.

This constant interaction and mutual interdependency of social actors with shifting endogenous and exogenous conditions holds important implications for understanding:

- ✓ How drivers of change are affecting social actors embedded within a larger community.
- ✓ How specifically their *cognitive* and *actual* relation to intra-cooperation, participation and empowerment can be understood in terms of the regulation of common pool resources and in terms of sustaining their daily livelihood.

⁴ An informal association consisting of approximately seven young males who have agreed to assist in each other's farm and rotate accordingly.

- ✓ How trends related to the abovementioned two points, can be placed within a broader analytical framework mostly with regards to governance and a fair sharing of common pool resources and with regards to long-term structural empowerment.

In addition, communities are highly heterogeneous in the sense that self-perception and views about others may collide, social stratification in terms of wealth and social position diversifies communities and opinions about certain issues such as land privatization differ as much as human individuals tend to differ. Nevertheless though voices and interpretations are plural, certain trends can be observed and are mentioned or touched upon unequivocally by respondents. Heterogeneity neither implies that policy recommendations or planned action are necessarily unworkable. It only means that a different vantage point is taken: one that is more complex, dynamic and less liable to generalization. Yet such vantage point is of fundamental importance, because conceptualization and the way reality is interpreted has real consequences in terms of policy formulation and translating ideas into actions that consequently impact the world.

The implications of human and environment interactions for CPR

Secondly, both Ilkimate and Iloshoron are not simply resource dependent communities left vulnerable to climate variability and changing precipitation patterns. Though there is awareness and a real concern about the menace of drought and decrease of rainfall, resource dependent communities are constantly in interaction with their natural environment to such an extent that both crisis and institutional renewal can occur (Berkes, 2006). This is exemplified by the continuous feedback and dialectics between the inhabitants of Ilkimate and Iloshoron and their direct natural environment when it comes to the management of CPR. This amongst others implies that environmental change such as climate variability does not just ‘affect or happen to’ communities as an exogenous driver. Instead decreasing precipitation patterns constantly foster human-environment interactions and changes therein. Nowadays, young males both in Iloshoron and Ilkimate tend to view their environment less in exclusive terms of pastoralism and use communal land increasingly in terms of farming partly due to experienced climate variability. At the same time the relationship to a common pool resource like communal land, is not only environmentally conditioned by exogenous drivers such as precipitation patterns. This means that in Iloshoron humans’ active relation to the environment is also socially conditioned through historically grown customary informal regulations that are simultaneously adjusted depending on the possible occurrence of drought and thus reenacted on a daily basis through face-to-face communicative action and informal decision-making. That CPR are socially conditioned is also illustrated by the fact that prevailing perceptions about the environment and its resources are inevitably shifting or socially reconstructed leading to new practices and institutions. The knowledge that communal resources such as the forest could be exploited for timber was not present several years ago. Yet because of experienced issues of exploitation, a common awareness about the necessity for governing this communal resource has developed leading to informal and formal inspection. At the same time, Ololesia a specific kind of tree has disappeared almost completely in the area due the commercial interest of a medicinal company in 2009, causing sudden institutional and environmental change in the form of locals cutting Ololesia until none was left. Finally land privatization is another driver that has become most prominent in how it socioeconomically and politically conditions people’s relation to the common pool resource of land and space. How this will affect people in terms of changes in livelihoods, sociocultural

effects and existing cooperation practices is uncertain and can hardly be predetermined. Even though social actors have different opinions and ideas about possible sociocultural and economic outcomes; complex social dynamics including individual human agency and larger systemic issues such as political and legal processes in relation to the expected subdivision of land cannot be clearly overseen and may lead to unpredictable sudden developments such as conflict, land grabbing or even traditional cursing of the group ranch members by the elders in Iloshoron. Hence this highlights the concept of ‘uncertainty’ within commons theory underscoring that any form of governance or policy invariably needs to find ways to cope with uncertainty and precariousness.

Commons theory also stresses path dependency. This theoretical concept is useful to understand how for instance the cooperative practice of Olokere disappeared in Ilkimate leading to entirely different customs of employing the village’s communal hills. Even though in the past the elders were the ones to govern communal Olokere, approximately ten years ago it was an elder who was the first one to start fencing a large piece of land to manage his private Olokere. An elder from Iloshoron warned him who also tried to convince other men in Ilkimate to prohibit such practices. However, they instead reacted with making their own private Olokere leading to a sudden institutional change of individual males confiscating pieces of land. Three brothers also entered the communal Olokere with mature cattle as to break the former cooperative practice. It is also important to mention that their elder father was unable to punish or stop them, probably because as a polygamous male he had never taken direct care of them nor favored these three sons which may have caused a decrease in authority or esteem from sons to father. As a *direct* consequence of this social dynamics, communal Olokere disappeared and currently private Olokere’s are visible around Ilkimate. However this informal privatization has also restricted mobility. As such especially during dry seasons herdsmen from Ilkimate may illegitimately make use of Iloshoron’s communally managed Olokere. This has led to increasing checks and regulations by males from Iloshoron. Thus the institutional change of informal private fencing in Ilkimate may also foster tension between the two villages, located approximately only 1,5 km away from each other. For example two male inhabitants from Ilkimate were planning to make a second homestead for themselves close to the communal (i.e.: unfenced) land of Iloshoron, basically to take advantage of the fact that the landscape around Iloshoron was still completely open without private fences such as wooden poles around homesteads. One elder from Iloshoron forbid them, threatening with ‘cursing to death’ in case they dared to do so. The abovementioned occurrences illustrate how interdependent social actions of individual actors are path dependent and often dynamically accumulating, while at the same time affecting current and future forms of interaction between humans and the environment.

Thus like commons theory stresses environmental change and as such CPR are mutually interdependent and embedded within a larger economic, political and sociocultural context that contains uncertainty and complexity due to a constant dynamics between humans and between humans and the environment. Nevertheless, two social aspects seem fundamental when it comes to a significant amount of daily intra-cooperation within communities on a personal and village-wide level including effective forms of regulating CPR. Those are firstly informal institutions in terms of a high level of social capital and secondly, presence of key social actors serving as effective leaders or ‘mavens’ within a community.

6.2. INTRA-COOPERATION, SOCIAL CAPITAL AND INFORMAL INSTITUTIONS FOR THE GOVERNANCE OF CPR

It is questionable why such a substantial difference exists in cognitive perception and actual experience of the level of intra-cooperation and sense of community in terms of solidarity and social bonding between Ilkimate and Iloshoron. It is insightful to realize, like Ole Riamit Kimaren from ILEPA argues that cooperation is not static, but a dynamic phenomenon conditioned by many factors like individual preferences and drivers of change such as climate variability or political processes. Moreover ‘cooperation does not just happen, but is a result of engagement and involvement.’ Both statements seem true and relevant for the analysis of the two villages. Nevertheless cooperation may be a dynamic phenomenon dependent upon many factors, out of the case study of Iloshoron it appears that particularly social capital and informal institutional practices are fundamental for sustaining intra-cooperation as a custom on a daily personal basis and when it comes to the management of CPR. This implies that necessary engagement and involvement, but also social reaffirmation, renewal and reorganization as elements of ‘cooperation’ as it is essentially a dynamic phenomenon, are sustained by a high level of social capital. Thus a high level of social capital may *express* itself in various institutional forms and practices. Yet in itself social processes of building involvement, social reaffirmation, reassurance and a continuous renewal of interaction and agreements between individuals *constitute* a high level of social capital.

The institutional framework explained in the theoretical section of this interim report emphasizes the key importance of informal institutions that can specifically foster trust, social relation, engagement and communication within complex adaptive social-ecological systems such as resource dependent communities. Not one respondent or participant from Ilkimate has narrated about ‘deciding as one village to migrate together’ or ‘being close to each other’. Yet mostly male villagers from Iloshoron have mentioned independently that collective oral agreements for common pools and intra-cooperative behavior on a daily basis are common. This is due to three interdependent and mutually influencing informal institutions that lead to a relatively high level of social capital, which can be termed as ‘social glue’. The first institution is a natural communal flow of casual and public meeting, continuous communication and spontaneous consulting with one another. Secondly, intra-cooperation for CPR is also maintained through peer pressure and social control based within common awareness and norms that stimulate social actors to check, report and inform one another. Through the abovementioned two informal institutional practices it is also likely that social memory is more effectively facilitated and maintained in Iloshoron than in Ilkimate. However, this point cannot be fully stated due to research time constraints. Thirdly, shared sociocultural values such as respect from younger to older age-sets also seem crucial in terms of upholding effective leadership by key social actors like particular elders who serve community interests.

Besides two types of individual actors are crucial for activating social memory, social connection and for effectively governing common pools communally (Folke et al., 2005). At least one type of them is present in Iloshoron. ‘Mavens’, that is a few proactive and well-respected key social

actors such as authoritative elders who are considered to be trustworthy and who generally serve collective and shared needs are a strong uniting factor. This also points towards the crucial importance of sound and fair leadership that provides communities with a shared vision, common understanding and a future direction. The fact is that in Ilkimate no such key social actors are active. Even though a black and white divide is unsound as an entire village as such cannot be generalized and personal differences of character are always present, yet the general social level of respect from younger to older age-sets is also perceived as low in Ilkimate.

The complex nature of informal institutions

On the one hand, the case study of Iloshoron implies that the functioning of social-ecological systems is not necessarily upheld by formal regulation or official governance, but rather through social relation and meaningful informal interaction (Leach et al., 1999). Yet Iloshoron may as such function as a rather cohesive community, informal institutions and practices are inherently dynamic depending on changing social, political and environmental drivers (Leach et al., 1999). Though a few specific adult males and elders in this village are mostly responsible for the customary daily regulation of the community, current modern governance such as Enkutoto's group ranch and official chiefs manage long-term structural changes that will significantly affect future livelihoods such as land privatization and the governmental legal obligation to the formal education of children. As such traditional and modern forms of governance are at times overlapping, conflicting or leading to hybrid forms of regulation, not to mention the influence of where considerable levels of power are concentrated. Key social actors such as elder Ole Seneyo may request Enkutoto's Group Ranch to invest in public resources such as roads or clinics, which is seen as unfeasible by group ranch members. Also even though Ole Seneyo may be endowed with full authority and respect within the village, he argues that when it comes to modern formal institutions such as the group ranch he feels illiterate and knows no other means than traditional ones (i.e.: cursing) to counter corrupt privatization processes.

Individuals' views and engagement for the common good also largely depend upon their socioeconomic position and identity. One female respondent from Ilkimate illustrates this by arguing: 'How can you think about 'the community' if you are still struggling for yourself, left by your husband? If you are struggling to educate your children and get enough food, how can someone think about the larger community?' The abovementioned indicates that informal institutions are neither 'simple' nor 'uniform', but dependent upon internal and external drivers of change and are often ridden with unequal power relations and differences in social position. This indicates the importance of both political ecology and avenues for the long-term structural empowerment of communities embedded within a larger sociopolitical system, but also of particular individuals or groups within a community.

6.3. A POLITICAL ECOLOGICAL PERSPECTIVE ON THE REGULATION OF CPR IN RELATION TO ASPECTS AND LEVELS OF EMPOWERMENT

Political ecology holds important implications for the analysis of the two villages. Indeed not only social differences in position and power are present in both case studies, but also socially and politically constructed representations of nature and views about other social actors affect how

the governance of CPR is functioning and at the same time developing. Though a more in depth analysis can only be given in the final thesis and for Iloshoron will be reserved all together, what matters is that looking at some of the key research findings of Ilkimate, at face value it is evident that lack of access to information, unheard voices, where control and power is seated and social identity play a role in how CPR are governed, who 'makes the rules of the game' and to what extent access and use is granted to certain individuals. The abovementioned issues also point towards the relevance of empowerment and why certain actors especially need to be supported and possibly trained to make their claims (Leach et al., 1999).

In Ilkimate the control over natural resources is mostly concentrated on a formal registered level of boards such as the water committee and Enkutoto's Group Ranch. For instance, the endowment of a position within the group ranch means that, powerful individuals can profit privately from communal land at the expense and sometimes without the immediate notice or consent of the larger community. Furthermore within the village itself, voices that are disregarded with regards to the control of important resources such as rivers and land, are still mostly women who are generally not allowed to attend meetings about for instance land privatization, let alone express their views and speak publicly in front of men. However, women were allowed to take part in Enkutoto's environmental committee that mostly monitors the forest and cutting of trees. Apparently for monitoring and conservation practices women are allowed to participate. Yet when it comes to water resources that are *used* instead of *monitored*, not only women, but also elders are excluded in Ilkimate. Social status in terms of wealth, age and educational level also matter in order to be heard according to 23 out of 31 respondents. Hence in terms of instrumental empowerment, in Ilkimate not everyone has the privilege to engage or involve him- or herself equally. This likely also affects the level of community empowerment in the sense that it is rather diffuse who actually governs or leads the community as neither elders nor other key actors such as village chiefs are proactively fulfilling this position, the more because individualism is experienced as relatively high in the village and voicing needs is reserved for individuals with certain characteristics. As such it becomes quite a challenge for a community to organize itself in terms of informal communal institutions and agreements. In this sense it is understandable that Ole Seneyo, a key leading social actor and elder from Iloshoron holds the opinion that: 'In Ilkimate it is *disorganized* and the elders lack authority to do something about it.'

However, all respondents from Ilkimate basically feel cultural self-esteem and are trying to educate and as such empower their children. Most of them are uneducated themselves, yet they generally appreciate and feel content about developing farming practices and sustaining pastoralism in a communal life due to both cultural and economic reasons. On a *micro*-scale it can be argued that as such most respondents feel that they have decision power over their livelihoods to a significant extent and that they are able to 'live the lives they have reason to value' (Sen, 1999). In addition, most respondents are eagerly looking forward to developments such as technology, livelihood diversification and the knowledge formal education brings, regarding it as fostering positive change. From an individual point of view these developments are mostly seen as favorable, but as a community it is questionable if they collectively know how to deal with the changes impacting them on multiple levels and in various ways. For instance in Ilkimate, among all respondents there is still willingness and a commonly felt need to cooperate more and to improve solidarity, probably due to the fact that it is barely ten to fifteen years ago when the

village was considered to be strongly united. Yet respondents do not exactly know how to reunite themselves or what action is needed, which at the same time is also comprehensible taking into account the complexity and constant change of social-ecological systems.

Additionally, Perkins and Zimmerman's⁵ definition of empowerment as given in the theoretical framework, points out that empowerment is also a process of involvement on a cognitive and social level. Cognitively speaking empowerment is a matter of critical awareness and understanding, that is formal or structural empowerment. In Ilkimate there is awareness in the sense that the same issues are felt and known among different respondents, even though other community members are generally perceived as 'uninformed'. Yet 'knowing' or 'being aware' is not necessarily the same as 'understanding.' If understanding also implies an active component, namely to have the capacity to act accordingly and to secure the right means to do so, then formal empowerment is experienced as rather low. As such it is questionable to what extent the autonomous decision power of people is actually maintained from a *macro* point of view with regards to a larger changing sociopolitical context. Social actors should not be victimized. Yet looking at the level of subjectively perceived capacity to mediate their rights and to take steps to enact social change, it becomes clear that a discerning grasp or commitment to what is practically needed in terms of action is not commonly felt. At the same it must be acknowledged that this kind of critical understanding may require a rights-based vision and can be demanding and neither is every individual necessarily interested in this level of formal empowerment.

Moreover, the so-called 'critical understanding' of a larger sociopolitical context is never objective, that is neutrally observed. Commons theory emphasizes that drivers of change are also to a certain extent socially and politically constructed based upon individual views and discursive practices. This implies that the level of intrapersonal empowerment conditions to what extent an individual is able to critically understand drivers of change as well as how an individual interprets and reflects upon them. This means that differences in educational background, personal competence, values and experience also influence differences in the level of formal empowerment between social actors. Variety in the level of formal empowerment may bring out differences in power and benefits like political ecology stresses, as some actors may have more skill to understand changing circumstances like technological or political drivers and turn them to their advantage, at times at the expense of others. For instance Enkutoto's Group Ranch has just been reelected in January 2014 and land privatization processes have recently started, issues of unfair registration practices, a prevention of public meetings by two of its members and the deliberate creation of a larger elite class associated with the group ranch have been occurring. As such although it cannot be assumed, it could be the case that Nick Kokai who is the treasurer of the group ranch, has given socially desirable answers during his personal interview. As a relatively educated man who knows English and who has been exposed to other knowledge frameworks and thus it can be argued he enjoys another level of intrapersonal empowerment than most people, he is able to interpret drivers of change as 'a gap between elitist leaders and the community', 'we need to educate the community no to cut trees'. At the same time, the interview with this key informant also points out that interpretation and a critical understanding of issues

⁵ 'An intentional ongoing process centered in the local community, involving mutual respect, critical reflection, caring and group participation through which people lacking an equal share of valued resources gain greater access to and control over those resources' (Perkins and Zimmerman 1995, p570).

and drivers of change are socially conditioned and constructed. In his understanding there is 'ignorance or lack of awareness about the menace of drought among community members, because of lack of education', 'people are still passive due to illiteracy' and 'many are not educated, how do you expect someone to assist another if cannot even assist himself?' This focus at formal education as the main reason for basically 'powerlessness' is probably a result of the fact that he is educated himself.

However though the importance of formal education cannot be underestimated, the pressing question remains with reference to Amartya Sen's capability approach, how social actors are deprived (i.e.: by who or through what factors and power relations?) or become capable of using their rights (i.e.: through which various ways and means?) in case they desire to do so (1999). Yet this is an extremely difficult question that exceeds the scope of this particular research. Instead what matters most is that for the further analysis of the research findings, political ecology in terms of taking into account power relations and dominant voices, at times cluttered social processes and discursive practices is fundamental for policy formulation and governance. Secondly, political ecology is interrelated with aspects and levels of empowerment and as such it also underscores the need for empowerment, specifically of those who do not invent 'the rules of the game' or remain structurally unheard. As such empowerment is a highly relevant issue in terms of fostering equality when it comes to the governance of CPR and possibly long-term social change.

PRELIMINARY CONCLUSION

Both the key research findings and the main line of reasoning will be elaborated and touched upon more extensively in the final research thesis. In the final research thesis an answer to the main research question and sub-questions will be given based upon the key research findings. In addition, the comparison between the two case studies of Ilkimate and Iloshoron will be elaborated to support the analysis and argumentation of the main conclusion. However, already several points can be generally emphasized as part of the main conclusion.

Firstly, communities like Ilkimate and Iloshoron are complex adaptive social-ecological systems that are heterogeneous, dynamic and plural. Political, economic, environmental and sociocultural drivers of change are similarly complex with interrelations ridden with unpredictability as the social dynamics of intra-cooperation for CPR, the uncertainty around the future outcomes of land privatization and climate variability in terms of possible droughts exemplify. Moreover the macro context of drivers of change is not neutrally observed, but socially conditioned by different forms and levels of empowerment. In addition, the environment and ecological change are not purely external conditions impacting communities. Instead there is a constant interaction, path dependency and mutual interdependency between humans and the environment, as the practice of 'Olokere' and the dynamics *within* and *between* the two villages indicate. Thus social-ecological systems are uncertain and hold no deterministic path towards future outcomes. Yet communities and individuals are also inherently diverse and dynamic, constantly reconfiguring and adapting themselves to changing conditions and drivers of change.

Secondly, informal institutions and social capital are crucial to sustain and constantly renew the dynamic nature of intra-cooperation and engagement, which contribute to a more equal and effective sharing of CPR. Social capital may express itself in a variety of institutionalized practices such as a regular community workday or youth activities. In the particular case study of Iloshoron, social capital is expressed mostly in terms of constant informal meeting and interaction, the presence and proactive leadership of a few key social actors and respectful customs and behavior from younger to older age-sets. Iloshoron illustrates the importance of 'social glue' for an effective governance of CPR. Yet the former paragraph also implies that it is unlikely that complex interrelated drivers of change do not impact the village of Iloshoron due to a relatively high level of social capital. At the same time this highlights an important question for analysis in the final research thesis and that is whether it can be argued that the community of Iloshoron is more empowered and better at coping with drivers of change than Ilkimate, because of a relatively high level of personal and village-wide intra-cooperative behavior as well as social capital and informal institutions.

In addition, the abovementioned points hold important implications for policymaking and the governance of CPR. The question is how cooperative forms (e.g.: informal social practices) can be developed for a fair and effective governance of CPR and also how they can be developed in such a way that they are flexible and adaptive to the complexity and dynamics of ever shifting social-ecological systems. In this respect commons theory holds several important insights as it stresses the need for 'adaptive governance'. Firstly, the two case studies underscore that indeed

any policy or intervention inevitably has to deal with complexity, uncertainty, change and constant dynamics: communities are highly complex and as such governance of CPR specifically needs to be *social process* orientated. This means that precisely because social dynamics in terms of human agency, the diversity of interests and drivers of change can never be entirely unified or predetermined, it is key to focus on building and constantly reaffirming as well as renewing the underlying social fabric: involvement, interaction and continuous communicative action as well as informal social institutions and practices in terms of trust, responsible ethical leadership and intergenerational assets such as shared values seem to be the ingredients for fostering intra-cooperation and a more equal governance and sharing of common pools, despite unavoidable plurality of views and social differentiation. Adaptive governance and its focus on facilitating and guiding *flexible learning processes* that are open to reorganization and negotiation, instead of trying to control change in an assumed steady state or aiming for a certain formulated static policy goal, is also relevant. The case study of both villages exemplifies that a formally design-orientated policy not only runs the risk of overlooking the complexity and dynamics of social-ecological systems, but also of mismatching the way in which informal social practices and institutions can almost ‘invisibly’ support an effective governance of the community and its communal resources through the construction of social meaning and interaction like in Iloshoron (Leach et al., 1999)

Secondly, within adaptive governance certain normative principles have been developed. However commons theory also acknowledges that how these governance principles are realized is inevitably influenced and conditioned by social differentiation in terms of authority, power as well as unheard voices and differences in the capacity to mediate one’s rights and needs (Armitage, 2008). Indeed especially the case study of Ilkimate shows that these issues have an impact upon the experienced level of instrumental and community empowerment. The fact that social reality is hardly ever neutral implies that any form of governance or policy invariably needs to cope with and take into account complex social processes and the impact of differences in social identity, participation levels and power. Thus extra attention should be given to questions around who makes decisions, who benefits from outcomes and who controls the process. In fact, governance or policymaking are embedded within politics and underlying assumptions and values themselves and as such are never socially or politically neutral (Armitage, 2008). Hence empowerment, not only of communities as such within a larger sociopolitical environment, but also of particular groups within the community itself is important when it comes to the governance of CPR. Finally empowerment is also relevant, because it is questionable if the Maasai’s from these two villages can collectively as a community, cope with the interrelated and mutually influencing internal and external drivers of change and developments that impact them now and in the future. Thus the relevant long-term question is: how can changes and (modern) developments be used to the benefit not only of certain individuals, but for a larger social unit; so that resource dependent communities can share an equal access and use to CPR, while living in sync with ongoing changing socioeconomic and political conditions; so as in the long run to empower themselves structurally without losing some of their most meaningful sociocultural values such as respect, assistance and solidarity with one another.

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