LINKING CLIMATE CHANGE ADAPTATION, SOCIAL CAPITAL AND NATURAL RESOURCE CONFLICT PREVENTION

THE CASE OF DISASTER RISK REDUCTION INTERVENTIONS IN THE UGANDA-KENYA BORDER REGION

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Declaration by candidate

I hereby declare that this thesis, “Linking climate change adaptation, social capital and natural resource conflict prevention: the case of disaster risk reduction interventions in the Uganda-Kenya border region”, is my own work and my own effort and that it has not been accepted anywhere else for the award of any other degree or diploma. Where sources of information have been used, they have been acknowledged.

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Signature:

Date: 31.08.2016
Abstract

In recent years drought-related crises and emergencies have increasingly plagued various regions across the globe. Recurrent droughts particularly in disaster-prone areas affect groups whose livelihoods depend solely on the availability of renewable natural resources, and in some cases, they have led to natural resource-based conflicts among communities. This is the case of pastoralist communities living in arid and semi-arid rangelands that are increasingly engaging in violent competition for scarce resources such as water and grasslands to feed their livestock. Responses from aid agencies and international humanitarian organisations to drought crises have thus shifted from a relief aid perspective that aims to simply save lives to a more systematic approach to saving lives by protecting livelihoods that are vulnerable to climate change impacts thereby ensuring food security. In practice, climate change adaptation programmes that aim to prevent natural resource conflicts have adopted the sustainable resource management approach. However, experiences with this approach in post-conflict settings show that some of these interventions have had a positive impact on peacebuilding while others did not. Emerging views within the climate change adaptation field stress that building the adaptive capacity and resilience of vulnerable livelihood groups to climatic shocks can prevent natural resource conflicts. This thesis thus explores the ways in which climate change adaptation programmes sustainably build community resilience to natural resource-based conflicts. Drawing upon the linkages between theoretical concepts such as adaptive capacity or resilience, and conflict transformation, this paper attempts to explain how conflicts triggered by deprivation and grievances can be prevented.

The paper conducts a qualitative case study analysis of two Disaster Risk Reduction (DRR) projects implemented along the Uganda-Kenya border and funded within the framework the European Union Drought Risk Reduction Action Plan (DRRAP) for the Horn of Africa from 2010 to 2013. Research findings show that forms of climate change adaptation interventions matter for natural resource conflict prevention. Climate adaptation strategies that aim to build resilience to climate change risks by developing social capital and thereby mediating access to other livelihood resources create avenues for conflict prevention. This paper also suggests that it is necessary to change the structures and attitudes that drive conflict as a means to resolve protracted social conflicts.
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You are my rock. Thank you for always believing in me.
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<tbody>
<tr>
<td>ACTED</td>
<td>Agency for Technical Cooperation and Development</td>
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<td>APFS</td>
<td>Agro-Pastoral Field Schools</td>
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<tr>
<td>AU-IBAR</td>
<td>African Union Inter-african Bureau for Animal Resources</td>
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<tr>
<td>CBO</td>
<td>Community Based Organization</td>
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<tr>
<td>CMDRR</td>
<td>Community Managed Disaster Risk Reduction</td>
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<tr>
<td>DADO</td>
<td>Dodoth Agro-Pastoral Development Organisation</td>
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<tr>
<td>DES</td>
<td>Demographic and Environmental Stress</td>
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<tr>
<td>DLCI</td>
<td>Drylands Learning and Capacity-Building Initiative for Improved Policy and Practice in the Horn of Africa</td>
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<tr>
<td>DMI</td>
<td>European Commission Drought Management Initiative</td>
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<tr>
<td>DRR</td>
<td>Disaster Risk Reduction</td>
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<tr>
<td>DRRAP</td>
<td>European Union Drought Risk Reduction Action Plan</td>
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<td>EC</td>
<td>European Commission</td>
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<tr>
<td>ECACP</td>
<td>Environmental Change and Acute Conflict Project</td>
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<tr>
<td>ECHO</td>
<td>European Commission Directorate-General for Humanitarian Aid</td>
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<td>ENCOP</td>
<td>Environmental Conflict Project</td>
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<tr>
<td>EU</td>
<td>European Union</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>HDI</td>
<td>Human Development Index</td>
</tr>
<tr>
<td>IGAD</td>
<td>Intergovernmental Authority for Development</td>
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<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<tr>
<td>IRP</td>
<td>International Recovery Platform</td>
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Introduction

Throughout the years, the Greater Horn of Africa region has experienced the worst cases of drought-related crises in the world. The most recent one being the 2011 drought that was considered as the worst in sixty years as it swept across parts of the region including Somalia – the worst hit, Ethiopia, Djibouti and Kenya. The United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) classified the range of severity of damage across the countries from crises to drought emergencies. Indeed, the impact of the drought was significant as it affected over 10 million people causing mass displacements of populations from Somalia to refugee camps across Kenya, Ethiopia and Djibouti. Furthermore, alarming levels of food prices and malnutrition led some aid agencies to warn of a threat of famine due to the scale of food insecurity.\(^1\) Other factors such as general insecurity, conflict as well as high levels of poverty, population growth and land degradation from poor land management also affect the region.\(^2\)

Against the backdrop of recurrent droughts across the region, cross-border conflicts have emerged among pastoralist communities over access to scarce resources, such as grazing land and water resources. These conflicts take place as pastoralist groups encounter one another as they move across international borders in search for water resources and pastures for their livestock. Such conflicts over resources mainly manifest as violent livestock raids – also referred to as ‘cattle rustling’. While a traditionally sanctioned practice to restock depleted livestock herds from long devastating droughts, this practice has gained prominence over the past decades and is characterised by large-scale armed conflict.\(^3\) The hostile nature of inter-group violence associated with cattle raids is attributed to the massive inflow of small arms from proximate civil wars within the region. In addition, young impoverished warriors

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increasingly engage in small arms trade to access weapons that enable cattle raids and ultimately create “a black market for commercial cattle trading (…)”.4

The general consensus in environmental security literature states that climate change is not a direct cause of local-level conflict, but rather acts as a “threat multiplier”5 in fragile states as it interacts with and exacerbates socio-economic and political challenges that communities are already facing. In particular, Von Uexkull’s analysis of the linkages between climate variability, vulnerability and armed communal conflicts in Sub-Saharan Africa demonstrates that three factors drive climate induced natural resource conflicts. It is the combined effect of livelihood vulnerability and poverty due to climate change-induced resource scarcity, reduced adaptive capacity to climate change risks and the political marginalisation of groups living in disaster prone areas that increases the risk of violent communal conflicts over natural resources.6

Building on these insights, there has been a recent shift in practice from purely emergency-oriented humanitarian responses to drought crises that seek to “save lives” through food aid, to a more systematic adaptation approach that aims to save lives through livelihoods.7 Climate change adaptation practitioners have adopted the sustainable resource management approach, which aims to broker community-based resource-sharing agreements through dialogue thereby de-escalating violence over contested natural resources.8 However, experiences with this approach in post-conflict settings show that some of these interventions had a positive

impact on peacebuilding while others did not. Indeed, governance institutions in post-conflict settings are fragile and do not have the right capacity to effectively support resource management efforts needed to protect natural resource-based livelihoods. Following this logic on the risk of governance issues in post-conflict settings, other scholars in the climate change adaptation field have stressed that resource conflicts can be prevented by building the adaptive capacity and resilience of vulnerable groups whose livelihoods rely on renewable resources that are susceptible to climatic shocks. However, these scholars provide little guidance – or rather no empirical evidence – on the specific sustainable climate change adaptation strategies that strengthen community resilience to climate change risks, including conflict.

As such, this paper will answer the following research question: How do climate change adaptation programmes build community resilience to natural resource-based conflicts? This paper aims to answer this question by drawing upon conflict transformation theory as it underscores the importance of structural and attitude change in resolving protracted social conflicts that essentially result from deprivation and social grievances. Also, the concepts of adaptive capacity and resilience provide insights into the structural attributes of resilient societies that enable communities to cope and adapt to climatic shocks while also maintaining peaceful coexistence in the face of climatic stress. Based on these theoretical perspectives, the research hypothesis of this paper posits that: building social capital reduces the likelihood of climate change induced natural resource conflict.

Furthermore, this paper tests this hypothesis through a qualitative case study analysis of two projects funded within the framework the European Union Drought Risk Reduction Action Plan (DRRAP) for the Horn of Africa from 2010 to 2013. This action plan sought to implement several drought resilience projects across the region as a measure to reduce the impact of disasters such as drought, floods and conflict on the livelihoods of vulnerable pastoralist communities. More specifically, this study will focus on Disaster Risk Reduction

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9 Ibid., p. 438
10 Ibid., p. 452.
projects implemented by development NGOs along the Uganda and Kenya border. The selection of case studies from the Uganda-Kenya border region is based on the fact that this border is the most volatile in terms of cross-border armed conflict between pastoralist groups over access to scarce vital natural resources. This research paper thus aims to scrutinize the cross-border disaster risk reduction interventions and identify the specific attributes of the different approaches to building community resilience to recurrent drought that effectively contribute to natural resource conflict prevention in the region under study. The data for this study was drawn from both primary and secondary sources, namely semi-structured interviews with six key informants and project reports, respectively.

In terms of the structure of this thesis, chapter 2 presents the intricacies of the debate in environmental security literature on the causal mechanisms linking environmental change to the risk of violent conflict, as well as the debate on the mechanisms through which climate change adaptation prevents natural resource conflict. Chapter 3 builds on the literature review and introduces a conceptual framework on conflict transformation and climate change resilience that highlights why forms of climate change adaptation interventions matter for preventing protracted resource conflicts. Drawing on insights from the theoretical concepts, chapter 4 presents the research hypothesis of this paper as well as the underlying assumption around it. Chapter 5 outlines the research design, including methods of data collection for the two case studies, research location and sampling, the limitations of the study and the data analysis process. Chapter 6 provides an overview of the pastoral livelihood system and the socio-political factors that contribute to environmental degradation within the East African drylands thereby driving resource conflicts among pastoralist groups. Subsequently, the chapter presents the rationale of the EU DRRAP in the Horn of Africa and the community-based model that was utilized for resilience-building activities. Thereafter, the research findings from the two case studies of projects implemented within the framework of DRRAP in the Uganda-Kenya border region are analyzed and linked to the theoretical concepts of this paper. Chapter 7 draws conclusions on the research findings from the two case studies and addresses the policy implications for climate change adaptation interventions within the framework of natural resource conflict prevention.

(Accessed on June 16th, 2015)

2. Literature Review

This review aims to present the intricacies of the debate in environmental security literature on the security implications of climate change with a focus on the causal mechanisms linking environmental change to the risk of violent conflict. In light of the consensus among environmental security scholars that climate change-induced environmental change is not a direct cause of conflict, the chapter explores the issue of socioeconomic vulnerability to resource scarcity and its linkages to communal violence. In consequence, the focus shifts to the theory in the literature that highlights the explanatory value of climate change adaptation to the prevention of climate induced natural resource conflicts, while also acknowledging the shortcomings in the literature regarding this theoretical assumption.

2.1 Climate change and security implications

Recent reports have made alarmist rhetoric about the impact that the “very likely” human-induced climate change\textsuperscript{14} will have on human and natural systems and larger sustainable development goals.\textsuperscript{15} Indeed, the atmosphere has reportedly gotten warmer by an increase of 0.74 degrees Celsius due to heightened global concentrations of greenhouse gases that trap heat in the atmosphere\textsuperscript{16}. These gases include carbon dioxide, concentrations of which are caused by the use of fossil fuels and change in land use, as well as methane and nitrous oxide, which are primarily produced through agriculture.\textsuperscript{17}

\textsuperscript{14} The United Nations Framework Convention on Climate Change refers to climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.” See: The United Nations Framework Convention on Climate Change, p. 7, https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/convenng.pdf (Accessed on 22nd September 2015)


\textsuperscript{17} Ibid., p. 2.
Against this backdrop, there are more growing concerns about the impact of climate change on security. The Third Assessment Report (TAR) of the Intergovernmental Panel on Climate Change (IPCC) focuses on the social vulnerability caused by climate change. Indeed, it suggests that natural and human systems will be affected by changes in “the average, range, and variability of temperature and precipitation, as well as the frequency and severity of weather events”. More precisely, the indirect environmental effects of climate variability such as “sea-level rise, soil moisture changes, changes in land and water condition, changes in the frequency of fire and pest infestation, and changes in the distribution of infectious disease vectors and hosts” will have an impact on food and water resources, ecosystems and biodiversity as well as human settlements and health. Considering the interplay between these phenomena, the report suggests that the relative vulnerability across different regions to these exposures is determined by their adaptive capacity through “access to resources, information and technology”, and by the “stability and effectiveness of cultural, social and economic governance institutions” which determine the kind of responses to climatic shocks.

The IPCC’s Fourth Assessment Report takes the climate change and security debate further as it makes long-term projections regarding the severity of the physical effects of climate change across various regions. For instance, Boko et al. predict that Sub-Saharan Africa in particular will be one of the hardest hit by climate change as climate variability has caused semi-arid conditions that reduce the potential of agricultural production. Other stressors such as endemic poverty, governance failures, infrastructural shortcomings and ecosystem degradation further exacerbate this vulnerability, which has contributed to the continent’s weak adaptive capacity.

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18 The IPCC was created in 1988 by a joint venture of the United Nations Environmental Programme (UNEP) and The World Meteorological Organization (WMO) to provide scientific knowledge on climate change and its environmental and socio-economic impacts. This international body does not conduct any research nor does it monitor climate related data or parameters but it is tasked to review and assess “the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change.” See: Intergovernmental Panel on Climate Change homepage, http://ipcc.ch/organization/organization.shtml (Accessed on 22nd September 2015)


20 Ibid.

Similarly, but with some contrast and added emphasis on conflict, the influential *Stern Review on the Economics of Climate Change* released for the UK Government suggests that developing countries are the most vulnerable to climate change due to their “geographic exposure, low incomes and greater reliance on climate sensitive sectors such as agriculture”; thus, conflict may arise in these areas since extreme local climate change will lead to forced migration.  

From a human security perspective, the German Federal Government notes that research evidence shows that unmitigated climate change has the potential to undermine the security of human beings as it “will increase human vulnerability, worsen poverty and thus heighten societies’ susceptibility to crises and conflicts.” Moreover, localized environmental conflicts could potentially destabilize societies and generate a ‘spill-over’ effect beyond national boundaries thus posing a threat to both regional and international security.  

Based on the abovementioned speculations on climate change threats put forward by key institutions that have laid the premises for the debate on climate change and its security implications, one can argue that climate variability in average temperature and precipitation levels as well as the prevalence of natural hazards affect human and natural ecosystems. Indeed, environmental changes alter soil moisture, land and water conditions, the distribution of disease vectors and generate a rise in sea-levels, which in turn, affect the availability of food and water resources, ecosystem biodiversity as well as human health and migration patterns. Consequently, severe poverty and increased human vulnerability may either increase susceptibility to crises and violent conflict at the national level, or lead to forced migration across various regions that would spark tensions a regional or international scale. However, Gleditsch and Nordas claim that these government- and think tank-sponsored contributions to the climate change debate have been largely based on seemingly unequivocal science-based

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24 Ibid., pp. 189-190.

assumptions and therefore lend little support to the specific mechanisms that link climate to conflict.\textsuperscript{26}

2.2 Causal links between environmental change and conflict

The environmental security field covers a broad range of issues related to the environment-conflict nexus, including the links between environmental change and conflict formation\textsuperscript{27}, the dependence on natural resource wealth and connections to violent conflict dynamics\textsuperscript{28}, the environmental implications of armed conflict\textsuperscript{29}, and environmental peacebuilding\textsuperscript{30}. However, contemporary literature on environmental security is largely focused on the first category, which examines environmentally induced violence.\textsuperscript{31} Early scholarly contributions to this field by pioneers such as Thomas Homer-Dixon and Günther Baechler analysed the linkages


between environmental change and violent conflict from a neo-Malthusian viewpoint. Other scholars later advanced different conceptual frameworks to analyze causal mechanisms linking environmental degradation to ‘non-state’ - more precisely, inter-communal armed conflicts.

2.2.1 The Neo-Malthusian perspective: linking environmental degradation, demographic pressures, unequal resource access and state-level conflict

Two influential qualitative research projects in the 1990s, namely the Environmental Change and Acute Conflict Project (ECACP) and the Environmental Conflict Project (ENCOP) by a Toronto-based group led by Homer-Dixon and a Swiss group led by Günter Baechler respectively, conducted exploratory work, the first of its kind, on the linkages between environmental scarcity or change and violent conflict.\(^{32}\)

Inspired by the neo-Malthusian perspective\(^{33}\), Thomas Homer-Dixon assumed that in cases of rapid demographic growth, a sharp increase in scarcity of renewable resources is expected due to the unsustainable use of the latter and subsequent environmental change. Essentially, as renewable resources (high quality agricultural lands and freshwater) are degraded and often depleted, this in turn, fosters inter-group conflict.\(^{34}\) In order to further advance the theoretical basis that posits that demographic and environmental pressures are key driving forces for civil violence, Homer-Dixon identified three causes of environmental scarcity. These include environmental degradation (supply induced scarcity), population growth and changes in consumption (demand-induced scarcity), as well as “unequal distribution” of the total


\(^{33}\) Thomas Malthus was an influential scholar with a particular interest in political economy and demography. In this 1798 study, An Essay on the Principles of Population, he argues that a rapid increase in demographic growth would substantively diminish the resources available for human survival. Neo-Malthusians follow in this tradition, although with added emphasis on current demographic pressures and economic changes, which constrain the capacities of both national governments and poor populations, leaving the latter in a state of deprivation. These structural dynamics thereby pose a significant threat to the political stability of many developing countries. See: Kahl, C. H. (2006), “States, Scarcity, Civil Strife in the Developing World”, Princeton, NJ and Oxford: Princeton University Press, p. 4.

resources available (structural scarcity). Empirical evidence from ECACP case studies further shows that these scarcities interact and mutually reinforce one another in two ways that generate significant social effects, which in turn, increase the risk of conflict.

On the one hand, Homer-Dixon refers to a process of “resource capture” by powerful groups within society that are aware of demographic and environmental pressures on renewable resources, and ultimately take control and alter the “laws and institutions governing resource access”. On the other hand, a second interaction occurs through the process of “ecological marginalization” which stems from inequalities in the structural distribution of arable land and water resources. Unequal resource distribution, in combination with demographic growth, forces poorly resourced populations to migrate into more environmentally fragile areas including “upland hillsides, areas at risk of desertification, and tropical rain forests”, which drive these dense rural populations into a state of economic deprivation with sometimes no alternative but to migrate further, often into cities. These two different interactions can lead to two forms of violence including ethnic group conflicts over resources as a result of mass migrations, and “deprivation” conflicts including incidents of civil strife and insurgencies. However, Homer-Dixon refines this rather rigid correlation by introducing the concept of “ingenuity” to demonstrate the ability of societies to adapt well to rising environmental degradation and mitigate the grievances that the latter produces. Indeed, a state that has significant sources of income from economic development can supply ingenuity in the form of “new technologies and new and reformed social institutions – like efficient markets, clear and enforced property rights, and effective government (...).” An unaltering “ingenuity gap” would limit the state’s ability to respond to societal needs, and subsequently exacerbate social grievances, dissolve the state’s legitimacy and authoritative power, and thereby increase the state’s vulnerability to armed conflict.

35 Homer-Dixon (1999), op. cit., p. 15; See also: Homer-Dixon (1994), op. cit., pp. 8-9. Environmental change or degradation in Homer-Dixon’s terms refers to a rapid degradation of renewable resources compared to the ordinary renewal process of a natural ecosystem. Population growth reduces the availability of resources per capita as they are divided among a growing number of people. And unequal resource distribution refers to a large concentration of resources among a few people while the majority of the population are deprived of them as a result of property rights legislation and natural resource governance.
36 Ibid.
37 Ibid., p. 16.
40 Ibid., p. 27.
In summary, resource capture and ecological marginalization can lead to conflict-generating processes. These include social grievances that are related to lower economic activity, a weakened capacity of the state to respond to societal needs, and as a result, forced migration of the poor within and across states. The latter ultimately leads to social fragmentation dynamics based on social identities.\(^{41}\) These causal links highlight Homer-Dixon’s main argument that resource scarcity generated either by resource degradation, demographic growth or unequal resource distribution, is an indirect cause of sub-state violence. Indeed, the combined effect of environmental scarcity and demographic pressures depends on the social, political and economic context of the affected country, including the effectiveness of state institutions and governance policies to respond to societal needs.\(^{42}\)

Günther Baechler and Homer Dixon’s conceptual frameworks are essentially similar as they both presume that environmental scarcity generates social consequences that trigger violent conflict (see figure 1).\(^{43}\) While the empirical results of the EN COP project partially support Homer-Dixon’s premise that resource scarcity simultaneously deprives the poor of their source of livelihoods and “disrupts key social institutions”\(^{44}\), Baechler seeks to broaden the theoretical concepts surrounding this causal mechanism.\(^{45}\) Indeed, in the context of the EN COP study, the disruption of key social institutions reflects the notion of “marginalization” of sections of the population which is essentially driven by two factors: discriminatory actions that deny certain groups equal and systematic access to natural resources, and weak governance by the state in marginal areas.\(^{46}\) Following this argument, Baechler contends that violence is more likely to occur in crisis regions that face socio-economic disparities and whereby discriminated groups are mobilized in a struggle for “social, ethnic, political and international power”.\(^{47}\) Thus, environmental degradation may trigger violent conflict dynamics but Baechler notes, “the threshold of violence definitely depends on sociopolitical factors and not on the degree of environmental degradation as such.”\(^{48}\) The similarity here

\(^{41}\) Homer-Dixon (1999), op. cit., p. 147.
\(^{42}\) Ibid., pp. 16-18.
\(^{44}\) Homer-Dixon (1994), op. cit., p. 7.
\(^{46}\) Ibid.
\(^{47}\) Ibid., p. 25.
\(^{48}\) Ibid., p. 32.
with Homer-Dixon’s argument lies with the fact that the effects of resource scarcity, considered a catalyst of conflict, are entirely dependent on the context in which they occur. In contrast to Homer-Dixon’s conflict typology, sub-state environmental conflicts that arise from discriminatory access to natural resources and weak state governance in marginal areas can occur at different geographical scales. These include “center-periphery” conflicts between actors within the same country, conflicts involving migrants “from war-torn or marginal rural areas” that spill across national borders, and ethnopolitical conflicts in host countries involving migrants and refugees who are, therein, socially and economically marginalized.\(^{49}\)

![Figure 1: Common conceptualization of security impacts of environmental changes.](image)


Critically building upon Homer-Dixon and Baechler’s approach, Colin Kahl provides his own innovative neo-Malthusian causal model that addresses the linkages between environmental scarcity and conflict. He introduces two alternative causal dynamics between the impacts of “demographic and environmental stress” (DES) and civil strife, which focus specifically on the role of the state.\(^{50}\) Kahl aims to downplay the abovementioned simple correlation between environmental and demographic pressures, poverty, unequal resource access and weak state capacities, on the one hand, and the emergence of civil violence, on the other. Drawing on social sciences theory, Kahl posits that the “deprivation hypothesis”, advanced by neo-Malthusians, not only fails to recognize the challenges that individuals willing to engage in violent social movements face, but also leaves “the causal role of the state (...) under-theorized.”\(^{51}\)

\(^{49}\) Ibid., p. 25.

\(^{50}\) Kahl C. (2006), op. cit., p. 29. Kahl refers to *demographic and environmental stress* [emphasis added] as the three sources of scarcity as defined by Homer-Dixon, namely population growth, the degradation of renewable resources and the unequal distribution of these resources. Civil strife in this context refers to “large-scale, sustained, and organized violent conflict” including revolutions, rebellions, insurgencies, civil and ethnic wars, and sustained terrorist movements (see page 30).

\(^{51}\) Ibid., p. 11-12.
Indeed, “poverty and a sense of injustice” within developing societies are not sufficient determining factors that would incentivize either organized groups to fight one another or the formation of rebel movements to fight against their government. If this were the case, poor and marginalized populations across the globe would relentlessly engage in organized violence. In fact, individuals actively considering engagement in intergroup violence risk high costs in terms of loss of life and property, yet their individual efforts to attack their counterparts are less likely to have a major impact on the success of a collective endeavour. This therefore reduces the prospects for a successful “formation of organized conflict groups.”

While Homer-Dixon and Baechler’s causal models consider weak state governance as an intervening factor that increases conflict risk amidst growing social grievances caused by demographic and environmental pressures, they also presume that these structural dynamics drive violence towards the state and between social groups. In contrast, Kahl posits that demographic and environmental stress place significant constraints on developing countries to meet pressing societal and development needs. As such, the economic and social consequences of DES generate two causal mechanisms that lead to civil strife. Firstly, state failure triggers “an internal security dilemma that produces powerful incentives - not simply opportunities – for antistate and intergroup violence." In this sense, diminished state authority forces social groups to bolster their own security when dealing with demographic and environmental stress and its impacts; this would most likely trigger a vicious cycle of violence. Secondly, weakened state authority provides opportunities for politicians to exploit their power and instigate civil violence between ethnic groups by motivating certain groups to capture key resources, in an attempt to maintain their base of supporters and a lasting grip on power; this is what Kahl terms “the state exploitation hypothesis.”

These accounts on the importance of state failure and state exploitation illustrate Kahl’s critical contribution to the scope of environment-conflict research. Indeed, the likelihood that civil strife will occur in developing countries that face the ecological, economic and social effects of demographic and environmental stress, is determined by the “strength of the state

52 Ibid., p. 11.
53 Ibid., p. 12.
54 Ibid., p. 28.
55 Ibid., p. 12.
56 Ibid., pp. 50-51.
and the ability of political institutions” to mitigate violence through facilitated solutions that address social grievances in a peaceful manner.\(^57\)

In conclusion, Thomas Homer-Dixon, Günther Baechler and Colin Kahl’s theoretical models inspired by neo-Malthusian thinking posit that resource scarcity and more precisely environmental degradation, is a trigger for violent conflict especially in developing countries. The cumulated effect of growing environmental scarcity and demographic pressures, in conjunction with other underlying contextual social, political and economic factors such as weak state institutions and governance policies, engender the formation of social grievances, which, in turn, ultimately lead to armed conflict. Social grievances include hampered economic productivity and increased competition for scarce resources among peasant populations whose livelihoods rely on renewable resources. Consequently, the failure of the state to effectively meet social development needs, especially in marginal areas, leads to mass migrations of poor people within and across countries in search for better livelihood opportunities. Moreover, discriminatory resource access policies promote unequal resource distribution among social identity groups. In view of this scope, it is right to argue that Homer-Dixon and Baechler thus recognize the importance of role of the state, its institutions and policies with regard to the mitigation of the social impacts of environmental degradation that contribute to civil violence.

From a critical and state-centric perspective, Kahl takes this premise further as he argues that growing resource scarcity, demographic pressure and unequal resource access, further limit the capacities of developing countries to meet pressing societal and developmental needs. State failure in this regard reinforces a security dilemma, thereby triggering a vicious cycle of violence as groups try to protect themselves against any aggressive behaviour from their counterparts. Furthermore, in the wake of social grievances arising from the combined effect of environmental degradation and population growth, institutional breakdown provides opportunities for political leaders to instigate intergroup violence in order to serve their own political interests.

In this light, the neo-Malthusian scholarship suggests that developing countries experiencing high levels of socio-economic disparities as well as political instability are most likely to experience internal violence that is identity-based or ethno-political in nature as a result of large migrations of economically deprived groups from rural to urban areas and across national borders. The wave of poverty and deprivation can also lead to civil strife and mobilized support for insurgencies that aim to topple the state.

\(^{57}\) Ibid., p. 12.
2.2.2. State-centric bias: critical perspectives on the Neo-Malthusian theory

Despite a pioneering and invaluable contribution to the environment-conflict research field, the neo-Malthusian perspective on the linkages between environmental degradation, demographic growth and violent conflict has been criticised for various reasons. Political ecologists such as Nancy Peluso and Michael Watts have criticized Homer-Dixon and Baechler’s models for lacking an in-depth analysis of the specific local processes through which violence unfolds based on the experiences of rural populations that are challenged by the increased scarcity of renewable resources and its adverse impact on agricultural productivity. Instead, Homer-Dixon and Baechler rather argue that the socio-political and socio-economic contexts are the ultimate causes of identity-based state-level violence. Peluso and Watts, thus, highlight the need to explore other relative factors, besides weakened state capacities to meet societal needs, which mediate the relationship between environmental degradation, population growth and environmentally induced violence.58

In a similar way, Tom Deligiannis criticizes the existing neo-Malthusian strand of qualitative research for examining the impacts of environmental and demographic stress primarily from the state lens, as the former presumably affects and weakens the state’s capacities to address substantial social grievances. Deligiannis claims that this “state-level bias” in research hinders an understanding of “local processes of environmental change and their local social effects (...).”59 Rather than analyzing the key impacts of environmental scarcities on people’s livelihoods and their ability to adapt to these negative effects, environment-conflict research has focused on an aggregate societal impact that undermines the repercussions on livelihoods, which generate social grievances. As such, the existing neo-Malthusian qualitative research only accounts for violence in the form of uprisings and violent social movements that threaten the integrity of the state and seek to topple the state.60 Yet, the consequences of local conflicts should not be overlooked. Small-scale environmentally induced conflicts may have a significant influence locally, disrupting social cohesion and migration patterns, and exacerbating tensions among ethnic groups in marginal areas where state governance is absent. These local level grievances may, at a later stage, inadvertently fuel and “condition patterns of violence during civil war and insurrections”.61

59 Deligiannis T. (2012), op. cit., p. 84.
60 Ibid.
61 Ibid., p. 85.
In summary, the critical perspectives put forward in this section by Tom Deligiannis as well as Nancy Peluso and Michael Watts have highlighted the inaccuracies of neo-Malthusian-inspired hypotheses regarding the linkages between environmental and demographic pressures and civil violence in developing countries. Indeed, Neo-Malthusian theory posits seemingly oversimplified correlations between environmental scarcity, demographic growth, unequal resource access, and weak state governance, and the emergence of state-level armed conflict that threatens the integrity of the state or seeks to shift the status quo. According to these scholars, this correlation minimizes the intermediary role that other relative but immediate local level dynamics may play in the formation of violence.

2.2.3. Socioeconomic vulnerability to climate induced renewable resource scarcity and impacts on communal violence

Emerging literature on the causal links between climate-induced environmental change and armed conflict has rehabilitated the idea that scarcity of renewable resources contributes to violent conflict. This stream of environmental security scholarship covers a wide scope of causal mechanisms that lead to climate related conflicts. This section of the paper will thus focus essentially on the immediate local-level effects of climate change that increase vulnerability to small-scale communal conflicts over natural resources.

Drawing upon insights from various environmental security scholars, Buhaug et. al. established a simplified casual model (see figure 2) that demonstrates linkages between climate change and armed conflict. The immediate consequences of climate induced environmental change at the local community level that increase the risk of conflict include hampered economic activity, depleted livelihoods, food insecurity and migration.62

Figure 2: Possible pathways to conflict

Source: Buhaug et. al. (2010), op. cit., p. 21.

Following the same argument but with some contrast, Smith and Vivekananda presume that it is this interaction between the physical effects of climate change and a number of various contextual factors in poor, developing and fragile states that determines the likelihood of violent conflict erupting. According to these scholars, fragile states are the most susceptible to local violent conflicts because weak governments do not have suitable socio-economic and political structures that are capable of mitigating the social impact of climate change. Consequently, communities therein have a low capacity to cope with the impacts of climate change. In light of this, their causal model depicts that the immediate socio-economic and political effects of climate change that are potential drivers of local violent conflict in fragile

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63 Smith and Vivekananda define fragile states as having “very limited governance capacity where the state is barely capable of performing key state functions such as security of citizens, protecting property rights, providing public goods to enable the functioning of the market, and providing social services, particularly education, health, and sanitation.” Fragile states also include post-conflict and crisis countries as well as those that are economically and politically unstable. See: Smith D. and Vivekananda J. (2012), “Climate Change, Conflict, and Fragility: Getting the Institutions Right”, in: Scheffran J., Brzoska M., Brauch H. G., Link P. M. and Schilling J. (eds.): Climate Change, Human Security and Violent Conflict - Challenges for Societal Stability, Hexagon Series on Human and Environmental Security and Peace, Vol. 8, Heidelberg - Dordrecht - London - New York: Springer, pp. 80-81.

states include livelihood vulnerability, food insecurity, limited access to renewable resources, decreased trade, social tensions as well as increased poverty and migration.65

In view of this scope, Lief Ohlsson is one of the pioneers to advance that the loss of livelihood is the causal link between environmental degradation and poverty on the one hand, and armed conflict on the other. Ohlsson argues that the loss of livelihoods as a result of scarce arable land, pushes young unemployed men into a state of deprivation, which subsequently forces them to migrate into cities where they fall victims of “hate-propaganda” advanced by militia groups to address social cleavages - a key source of grievances. In addition, joining a militia group and taking part in criminal activities becomes a highly lucrative business for economically deprived individuals.66 Drawing upon Ohlsson’s argument, Barnett and Adger further suggest that it is the sudden realization that one’s livelihoods are at risk and the perception that poverty and future insecurity are at stake that ultimately increase an individual’s propensity to join armed groups. Declining livelihoods are driven by two factors: reduced access to natural resource capital, for instance fertile land, due to environmental stress factors such as deforestation, land degradation or drought and floods, but also other non-ecological factors such as land evasions and population growth.67 Barnett and Adger thus note that while climate change may, under certain circumstances affect an individual’s perception of livelihood security, it may also increase the risk of violent conflict.68

More recently, Von Uexhull provided valuable perspectives to this stream of literature. Convinced that studying previous climate variability and natural hazards in specific regions would provide further insights into the potential linkages to conflict and the broader security implications of climate change, she focuses on the linkages between climate variability and armed conflict, in particular communal conflict, in Sub-Saharan Africa.69 Drawing upon literature on vulnerability to disasters and the causes of conflict in Sub-Saharan Africa, her main argument is that two factors make certain regions more susceptible to experiencing

65 Ibid., p. 10.
68 Ibid., p. 646.
violence particularly following variations in precipitation and temperature levels. These include on the one hand, a fragile ecological environment, and on the other hand, the “socio-economic resilience” of individuals and communities to climate change impacts. Socio-economic resilience here refers to three factors, namely the “levels of political marginalisation and poverty” among social groups, as well as the tendency of a conflict trap. Based on this overview, Von Uexhull’s argument is fundamentally similar to the ones presented earlier in this section in so far as she departs from the premise that climate variability generates resource scarcity, which triggers negative economic effects that undermine livelihoods. Based on this argument, politically marginalised groups in disaster prone regions that are deprived of food and a source of income, and have also experienced a history of inter-communal conflicts, are more vulnerable to the adverse impacts of climate variability and equally more likely to engage in armed conflict.

In summary, this section has demonstrated that there is a general consensus in environmental security literature that climate change is not a direct cause of conflict in fragile states because it interacts with and exacerbates socio-economic and socio-political challenges that communities are already facing. These challenges include political and economic instability, weak governance systems and social fragmentation. However, the immediate impacts of climate-induced environmental change at the local-level include insecure livelihoods for communities that rely heavily on renewable resources as a source of income. In addition to vulnerable livelihoods, the political marginalisation of groups located in ecologically fragile regions that are prone to natural disasters and experience high climate variability further affects their social wellbeing. As a result, their reduced socio-economic capacity to adapt to the challenges of climate change increases the risk of armed conflict. Based on this analysis, one can conclude that three factors mediate the relationship between climate induced environmental change and violent communal conflicts. Indeed, the cumulated effect of livelihood vulnerability to climate change-induced resource scarcity, the reduced socio-economic capacity to adapt to climate change risks and the political marginalisation of groups living in disaster prone areas, increases the risk of violent communal conflicts over renewable resources.

70 Ibid., p. 167.
71 Climate variability is understood here as short term fluctuations between normal temperature or rainfall trends, which lead to either droughts or floods from excess rainfall and ultimately to resource scarcity. See: Von Uexhull (2014), op. cit., p. 162.
72 Ibid., pp. 163 – 164.
73 Ibid., pp. 168-169.
2.3 Climate change adaptation and the prevention of climate-induced resource conflicts

Scholars from the rather ill-defined stream of climate change adaptation literature postulate that strengthening the capacities of affected communities to adapt to the impacts of climate change reduces the negative effects of climate change on individual well-being within these communities. In a broad sense, the assumption here is that developing adaptive strategies as a means to cope with the ongoing threat of climatic shocks and environmental degradation mitigates the risk of violent conflict among natural resource-based livelihood communities.\(^\text{74}\)

In light of the speculative nature of the abovementioned assumptions on the link between climate change adaptation and resource conflict prevention, which lacks empirical evidence, concrete examples exist on effective climate adaptation processes in natural resource conflict contexts. In recent years, the UN and other international development agencies have been involved in natural resource-based interventions in post-conflict contexts that aim to prevent conflict over scarce renewable natural resources. Support for climate change adaptation in these post-conflict contexts has been primarily through the sustainable management of scarce natural resources. However, this section will highlight the shortcomings of resource management interventions with regards to preventing natural resource conflict.

2.3.1 Livelihood adaptation through sustainable natural resource management

Scholarly contributions by Brown et. al. address the linkages between adaptive capacity, conflict and peacebuilding in Africa. They emphasize that established measures that aim to protect vulnerable natural resource-based livelihoods, to ensure access to vital natural resources and to support robust conflict resolution institutions can reduce the vulnerability to variable climate conditions thereby preventing natural resource conflicts. In the same light, early warning systems that facilitate information gathering on climate risks can also bolster peacebuilding efforts in conflict prone areas. The same applies to adaptation activities that are

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designed and implemented to encourage divided groups to actively participate in the joint management of resources such as water and arable land.\textsuperscript{75}

These arguments are also reflected in the UN’s \textit{Renewable Resources and Conflict Guidance Note} which lists key intervention strategies that can transform natural resource conflicts and lay foundations for “cooperation, confidence-building and sustainable development.”\textsuperscript{76} These natural resource conflict prevention strategies could be potentially effective if they aim to foster “consensus and mutual trust” around three logics: joint natural resource management, equal access to key renewable resources and peaceful conflict resolution.\textsuperscript{77} This objective can be achieved in three ways: Firstly, by adopting the sustainable livelihoods framework\textsuperscript{78} in order to reduce competition over renewable resources. It is also worth exploring alternative livelihoods that are less vulnerable to renewable resource scarcity, improving the efficiency of already existing resource-based livelihoods, or protecting scarce natural resources from degradation. Secondly, interventions can aim to improve existing resource governance structures and bolster the institutional capacity of civil society groups for conflict resolution. Lastly, interventions can establish appropriate institutions to manage transboundary resources as well as to reinforce and monitor the implementation of cross-border resource sharing agreements and sanction violations.\textsuperscript{79}

\textsuperscript{77} Ibid.
\textsuperscript{78} The sustainable livelihoods framework helps to analyse the impacts of climate change on livelihoods and assess the available assets and coping mechanisms that could be utilized to counter the effects of external shocks. Within this framework, livelihoods assets as the capital that a household owns and can access to make a living. These assets are regrouped into five categories, including human, social, natural, physical and financial capital. They are also the basis of a household’s livelihood strategies in that the former will develop strategies based on the assets available to make a living, for a desired livelihood outcome. Livelihood strategies – the way people use their assets - are also shaped by the institutional and social context within which a livelihood is developed. This context can also be influenced by external shocks, which play a crucial role in the sustainability of a livelihood system. See: Department for International Development (DFID) (2011), “Sustainable Livelihoods Guidance Sheets”, http://www.eldis.org/vfile/upload/1/document/0901/section1.pdf (Accessed on October 4th 2015); International Recovery Platform (IRP) and UNDP-India (2010), “Guidance Note on Recovery: Livelihood”, Kobe, Japan, p. 2. Available at: http://www.unisdr.org/files/16771_16771guidancenoteonrecoverylivelihopdf (Accessed on 4th October 2015)
Likewise, Helen Young and Lisa Goldman in their recent publication stress that “post-conflict livelihood interventions” that support the sustainable management of natural resources that are essential to livelihoods strengthen peacebuilding among groups that are competing over contested renewable resources.\(^\text{80}\) Case studies on Afghanistan and the Philippines where local armed conflict has persisted over contested access\(^\text{81}\) to natural resources, demonstrate that community reconciliation through community-based resource management contributes to post-conflict peacebuilding. Indeed, local-level initiatives that explicitly aim to improve local natural resource governance through dialogue, indirectly serve as platforms that reinforce confidence-building and peacebuilding among divided groups. Through active participatory dialogue, trust is rebuilt among divided parties to not only facilitate negotiated access to contested resources but also to develop community approaches for managing natural resources with government representatives involved.\(^\text{82}\) Based on this premise that efforts to sustainably manage vital natural resources foster lasting peace, Young and Goldman conclude that post-conflict peacebuilding interventions that support sustainable livelihoods lay the foundations for community resilience to conflict and environmental change.\(^\text{83}\)

In conclusion, this section demonstrates that livelihood interventions that promote the sustainable use of natural resources indirectly contribute to post-conflict peacebuilding in contexts where conflict arises from resource competition. In this sense, community-based resource management that is facilitated through dialogue helps to restore the trust needed to negotiate access to contested resources and equally builds the capacity of divided communities to resolve future resource conflicts in non-violent ways. Thus, the logic behind the sustainable resource management approach effectively decreases the likelihood of resource based conflicts because it aims on the one hand, to reduce competition over scarce natural resources and improve existing resource governance structures, and on the other, bolsters the capacity of civil society groups for conflict resolution.

### 2.3.2 Towards strengthening community resilience to climate change risks

\(^\text{80}\) Young H. and Goldman L. (2015), op. cit., p. 452.
\(^\text{81}\) In Afghanistan, longstanding historic conflicts exist over large pasture territories in the central highlands. On the island of Mindanao in the Philippines, conflicts over agricultural land, fisheries and forests have forestalled the sustainable development of community livelihoods. See: Young H. and Goldman L. (2015), op. cit., pp. 435-437.
\(^\text{82}\) Ibid., pp. 436-437.
\(^\text{83}\) Ibid., pp- 451-452.
While the previous section provides valuable insights into the positive feedback loops of sustainable resource management for post-conflict peacebuilding, this section will highlight the shortcomings of this type of livelihood adaptation intervention. In addition, this section will also explore the recent focus in climate adaptation literature around the issue of building resilience to climate change risks and its linkages to resource conflict prevention.

Based on the lessons that emerge from the case studies and experiences with natural resource-based livelihood interventions, Young and Goldman affirm that some of these interventions were successful while others did not effectively strengthen post-conflict peacebuilding. One of the key reasons for this ineffectiveness is the lack of a rigorous institutional capacity to support livelihoods as well as sustained capacity-building efforts among civil society stakeholders.84 These efforts entail working with relevant stakeholders at local and higher levels of authority.85 However, Smith and Vivekananda stress that fragile states are more susceptible to face the impacts of climate change and the risk of conflict because their system of governance make them “either unwilling or unable – or both – to take on the task of adaptation and peacebuilding.”86 Based on these accounts, one can also argue that it is challenging to engage with government stakeholders in fragile states in order to develop the adaptive capacities of communities living in disaster prone areas. Moreover, disaster prone areas are often remotely located and marked by weak or nonexistent state governance and thus face longstanding political and economic marginalization.

It is also interesting to note here that the United Nation’s Environment Programme advocates for “improved environmental management” capacity – that is, improved natural resource management - as a tool to increase state and community resilience to climate risks and their impacts.87 Presumably, this strategy equally contributes to long-term stability and peace in conflict-affected countries and promotes sustainable development.88 However, it is important to note here the risk that an already fragile resource governance institutional structure may not be able to absorb the right capacity to effectively support peacebuilding efforts and thereby build resilience to climate induced natural resource conflicts.

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84 Ibid., pp. 447-449.
85 Ibid., p. 452.
88 Ibid., p. 6.
In view of this scope on the role of the state and governance related issues, it is important to enquire whether support for sustainable natural resource-based livelihoods through resource access institutions that enhance the capacity for resource management is a sufficient determinant for reducing resource conflict risk. Do these localized solutions create the right shift in individual mindsets and behaviour that allows for a long-term collaboration that fosters lasting peace between adversaries? Following in this line of thought, one can thus argue that there is a need to explore other approaches through which livelihood interventions can strengthen community resilience to climate change risks, including conflict.\(^{89}\)

In a new debate on *climate-resilient peacebuilding*, Crawford and colleagues acknowledge that climate impacts on the environment are contributing factors that drive conflict in fragile states. They also note that the ultimate objective of peacebuilding processes in these states should be to simultaneously strengthen resilience to climate risks.\(^{90}\) They argue that “building resilience of systems and of people will prepare them to better manage the risks and the uncertainties associated with climate change, as well as other types of shocks, thereby reducing stresses that could evolve into drivers of conflict.”\(^{91}\) However, these scholars provide little guidance – or rather no empirical evidence – on specific *climate change adaptation strategies* that in practice strengthen community resilience to climate shocks and conflict.

Emerging insights from the environmental management literature demonstrate the importance of building social capacity to respond to climate change impacts by involving diverse stakeholders in resource management processes. Scholars refer to these collaborative and adaptation processes as adaptive management. This kind of management “focuses on understanding ecosystem dynamics and feeding ecological knowledge into management organizations.”\(^{92}\) More precisely, this involves collaborative efforts within communities to allocate and ensure the sustainability of renewable resources that are susceptible to environmental change, and thus pose a high risk to resource dependent livelihood groups. However, scholars such as Neil Adger and Fikret Berkes argue that collective action requires social capital, which refers to a network of groups within society through which relationships

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\(^{91}\) Ibid., p. 7.

are built and information shared on how to cooperate for the common good. Building social capital through networks provides channels to address conflicts, build trust, and ensure access to other necessary resources, but also facilitates social learning as individuals engage in “learn-by-doing” and share their experiences and ideas with others. In sum, Adger suggests that it is the social linkages that allow avenues for information sharing, enhanced livelihood security and reduced risk in the face of climate change. Thus, social capital “is likely to be a key element in any strategy for adapting to climatic hazards.”

In conclusion, the debate in the climate change adaptation literature regarding the sustainable resource management approach, and building social capital as a means to strengthen community resilience to climate related natural resource conflict, underscores the need to scrutinize livelihood adaptation interventions. The objective here is to provide empirical evidence of interventions that effectively prevent natural resource conflicts.

3. Conceptual framework

This chapter aims to elaborate on the key concepts, based on the literature review that must be taken into consideration when assessing approaches to climate adaptation and how they effectively prevent natural resource conflicts in regions that are highly vulnerable to disasters. This review makes the case for adopting the conflict transformation approach as it stresses the importance of structural and attitude change in resolving protracted social conflicts that essentially result from deprivation and social grievances. Drawing attention to the concepts of adaptive capacity and resilience, this section also highlights the structural attributes of resilient societies that enable these communities to cope and adapt to climatic shocks in non-violent ways.

3.1. Deprivation in protracted social conflicts

Social scientists who have analyzed conflict view it as a phenomenon that is present in everyday human and social interactions. Social psychologists such as Pruitt, Rubin and Kim refer to conflict as “a perceived divergence of interest, or a belief that the parties’ current aspirations cannot be achieved simultaneously.” As social psychologists, they believe that

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these perceptions have an impact on social behaviour.\textsuperscript{96} In a similar way but from an economic perspective, Kenneth Boulding states that it is the different sets of values that embody adversaries, which define their behaviour at a particular time. Following the logic of social psychologists on the linkages between perceptions and aspirations and social behaviour, Boulding also notes that awareness of divergent desires triggers conflict situations.\textsuperscript{97} In his attempt to understand the social and institutional structure of Western society, Max Weber also notes that conflictual social relationships stem from competition between individuals to attain “control over opportunities and advantages” that are equally desired by others for survival.\textsuperscript{98}

While there seems to be a consensus in literature that conflict arises from competition over mutually incompatible desires, there is also somewhat a consensus that conflict nurtures social change and fosters group unity. For instance, sociologists such as Simmel and Coser illustrate the socialization purposes of conflict. On the one hand, Simmel perceives emotional aspects such as hate, envy, need and desire as “disassociating” factors that cause conflict. In this sense, situations that aim to achieve peace among conflicting groups ultimately alleviate “diverging dualisms”, thereby enhancing group unity.\textsuperscript{99} On the other hand and building upon Simmel’s general argument that all social groups are never entirely harmonious, Coser advances that the disruptive character of conflict promotes group formation and integration.\textsuperscript{100}

Edward Azar’s theory on protracted social conflict is key to the conflict resolution field and a tool for understanding the protracted nature of climate induced natural resource conflicts. Indeed, Azar describes protracted social conflicts as not merely identity-based, but also driven by political, social and economic dimensions.\textsuperscript{101} More importantly, Azar draws upon John Burton’s human needs theory to argue that the primary source of conflict is the denial of societal needs in terms of security, identity and recognition, which is also closely linked to

issues of underdevelopment.\textsuperscript{102} In light of Azar’s theory, one can argue that the primary source of protracted natural resource conflicts is weak state governance in disaster prone areas in terms of institutional incapacity or unwillingness to protect community livelihoods that are vulnerable to climate induced environmental change. This is linked to the narrative in the literature in that violent competition over scarce resources within communities arises from the combined effect of economic deprivation due to resource scarcity, reduced adaptive capacity of vulnerable communities to climate risks, and the political marginalisation of these groups.

3.2 Conflict transformation and structural change

As discussed in the literature review, narratives in the climate adaptation literature are in line with the argument in conflict resolution literature that states that deprivation of human needs, which is also closely linked to weak state governance, is the primary source of protracted social conflict. Climate adaptation scholars therefore suggest that building the capacity of deprived and vulnerable resource-dependent livelihood groups to cope with the negative effects of climate change ultimately generates a process of change. This process presumably reduces vulnerability and strengthens the adaptive capacity to climate change risks, including environmental change and conflict thereby preventing natural resource conflicts. Based on these accounts, it is important here to examine how these narratives on climate adaptation and change are actually linked to conflict transformation theory.

Conflict transformation scholars and practitioners such as Adam Curle and John Lederach have discussed conflict resolution processes. Curle considers that conflict transformation occurs through a process that changes relationships between adversaries from unpeaceful to peaceful ones. For Curle, peaceful relationships differ from unpeaceful ones in that they involve “active association, planned cooperation, an intelligent effort to forestall or resolve potential conflicts” on equal and reciprocal grounds. That is to say that there is a sense of mutuality in assistance, understanding concern and collaboration. Therefore from Curle’s perspective, conflict resolution or rather peacemaking requires changing relationships between adversaries to a point where growth is made possible.\textsuperscript{103} Building on Curle’s conceptual framework, Lederach views conflict as a process that is constantly informed by


human interactions and perceptions.\textsuperscript{104} As such, his conflict transformational approach underscores the need for reconciliation in protracted conflicts.\textsuperscript{105} The complex process of reconciliation entails on the one hand, capacity-building or empowerment of warring parties to work together and proactively towards a desired change in their conflict setting, and on the other hand, building relationships within and between groups to secure the sustainability of the peacebuilding process. More precisely, through capacity-building mechanisms, adversaries are empowered to encounter one another and work towards desired change, while breaking down the negative stereotypes. By way of this process, parties develop a better understanding of one another as individuals, which in turn, builds an “awareness and realisation of increased relational interdependence.”\textsuperscript{106}

Drawing upon insights from the conflict transformation school, Christopher Mitchell notes that the main philosophy of the conflict transformational approach is to enforce a radical change in the structural dynamics that give rise to conflicts.\textsuperscript{107} In the same way, Kumar Rupersinghe provides a more comprehensive framework for analysing the long-term conflict transformation process, which addresses specific structural aspects regarding how conflict is formed, escalates, endures, ceases and recurs. He stresses two mechanisms to achieve structural reform in deep-rooted and protracted conflict settings. On the one hand, by “building and/or [the] revival of indigenous political, social and economic mechanisms (…) which militate against the use of violence”. On the other hand, it can revolve around “sustainable structural and attitudinal changes (…) within society and new institutions (…) to address outstanding issues.” For sustainable change in conflict contexts, these institutions could include peace constituencies, effective governance institutions and a culture of tolerance and negotiation if potentially violent disputes arise.\textsuperscript{108}

### 3.3 Linking structural change to adaptive capacity and resilience

In light of the previous section, the conflict transformation approach suggests that transforming protracted social conflicts requires the radical reformation of the structures and attitudes that drive conflict as well as the establishment of new institutions that support peace.

\textsuperscript{105} Ibid., p. 27, 107-109.
\textsuperscript{106} Ibid., pp. 108-109.
The concepts of adaptive capacity and resilience are consistent with the main idea of structural change that is the pillar of the conflict transformation approach. As mentioned previously in the literature review, vulnerability to climate change impacts is considered a structural cause of natural resource conflicts. Therefore, efforts to build adaptive capacity to climate change challenges require necessary changes in livelihood strategies as well as in the underlying structural dynamics that are a source of vulnerability.

The IPCC defines climate change adaptation as “adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.” Mark Pelling reiterates in simple terms that adaptation is “the process through which an actor is able to reflect upon and enact change in those practices and underlying institutions that generate root and proximate causes of risk, frame capacity to cope and further rounds of adaptation to climate change.” Arguably, adaptation is associated with the notion of adaptive capacity, which is a key constitutive factor of vulnerability. The vulnerability of a “social-ecological system” is determined by how susceptible and sensitive the system is to external shocks, as well as its capacity to take action in order to cope with these shocks. Therefore, when the adaptive capacity of a system increases, this, in turn, reduces vulnerability to external risks.

Jonathan Ensor and Rachel Berger who are particularly interested in community-based adaptation follow climate adaptation scholarship in arguing that adaptive capacity and resilience are closely related. Adaptive capacity refers to the potential of actors within a socio-ecological system to actively adapt to the risks of climate change by utilizing assets that are available to them to create and shape alternative livelihood strategies. Building the ability to respond and enact change also enables communities to “cope and recover” — described as resilience —, thus increasing prospects for the survival of natural resource-based livelihoods in the face of climate shocks. In this regard, Ensor and Berger note that one of the key anchors of adaptation and resilience at local community level is a diverse set of “social, economic,
physical and natural assets” as well as skills and opportunities to make informed decisions on how to best adapt livelihoods.\textsuperscript{115}

Ensor and Berger note that a second attribute of adaptive capacity is experience-based learning – also referred to as social learning by Pelling. By way of an appropriate institutional framework that supports processes of learning within communities, individuals are able to draw on alternative and innovative ideas and practices to expand the range of coping strategies in the face of climatic stress.\textsuperscript{116} These institutions include social networks – also referred to as social capital – that serve as a mediating factor for collective action regarding the management of scarce environmental resources and for bridging relationships between individuals that wish to pursue shared objectives.\textsuperscript{117} Networks of relationships thus act as channels for sharing information or knowledge and other tangible resources such as economic goods and services among individuals within societies.\textsuperscript{118} In addition, social networks foster relationships built on trust and reciprocal action, and through social learning, help to shape and influence processes of behavioural change that emerge from collective action. In this sense, positive behaviour and practices, which best meet the challenges of climate change, are easily replicated among members of a local network.\textsuperscript{119} With the goal to further frame resilience, Pelling reiterates that societies that develop capacity for social learning are more likely to create opportunities to self-organise in informal community groups that work independently of the state to build capacity to respond to climate change related challenges. Self-organisation can take different forms such as “community development groups or trade associations (…)” and other informal networks.\textsuperscript{120}

In conclusion, this section supports the narratives in the previous chapter as it has demonstrated that building resilience to climate change risks through social capital enacts a process of structural change as described in the conflict transformation theory that ultimately prevents climate induced natural resource conflicts. Indeed, building social capital through networks serves as a channel for experience-based learning and knowledge sharing needed to

\begin{footnotesize}
\textsuperscript{115} Ibid., p. 18.
\textsuperscript{119} Ensor J. and Berger R. (2009), op. cit., p. 21; See also: Pelling M. (2011), op. cit., p. 59.
\textsuperscript{120} Pelling M. (2011), op. cit., p. 61.
\end{footnotesize}
manage resources and adopt alternative livelihood strategies. Networks also facilitate access to other tangible resources such as economic goods and services among individuals. Localized community networks thus mediate collective action for resource management and also create a space for innovative ideas and practices that allow for the expansion of the range of coping strategies in order to meet climate change challenges. Socially accepted practices, norms and peaceful behaviour that shape community life are also mediated through the process of learning and the underlying relational ties and trust built within social networks. Lastly, societies that develop capacity for social learning are more likely to create opportunities to self-organise in informal community groups in order to build capacity to respond and enhance resilience to future climate change related challenges. In sum, as access to more livelihood assets are facilitated through social capital, community livelihoods are secured and this in turn, decreases the likelihood of communities engaging in violent activities in the face of climate induced resource scarcity. Drawing upon the literature presented in the previous chapters, the linkages between building social capital and climate induced natural resource conflict prevention are summarized in the table below:
Table 1: List of research variables and respective empirical indicators.

4. Research hypothesis

As the review on the linkages between the concepts of adaptive capacity and resilience and structural change suggests, climate change adaptation interventions that aim to change the underlying structural dynamics that cause vulnerability to climate change impacts are arguably more likely to prevent climate induced natural resource conflicts. These include

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121 The list of the empirical indicators of social capital is partly adapted from the conceptual chapter of this paper and from the International Recovery Platform (IRP) and UNDP-India’s Guidance note on livelihood recovery. See: International Recovery Platform (IRP) and UNDP-India (2010), op. cit., p. 2.
adaptation strategies that establish an appropriate institutional framework that fosters adaptive capacity and enhances the resilience of resource-dependent livelihoods that are vulnerable to climate change risks, and at the same time facilitates changes in social attitudes towards peace.

As such, the rationale behind the concepts of adaptive capacity and resilience arguably provides answers to the research question of this paper. Indeed, by increasing the ability to cope and recover from the risks of climate change through building social capital and thus mediating access to other livelihood capital, this creates avenues for conflict prevention. In this light, this paper will thus test the following research hypothesis: building social capital reduces the likelihood of climate change induced natural resource conflict.

5. Research design

This paper will test the above-mentioned hypothesis by conducting a case study analysis of two DRR projects implemented within the framework of the DG ECHO-funded DRRAP for the Horn of Africa. More specifically, this study will focus on the implementation of DRR projects by development NGOs along the Uganda and Kenya border, which is the most volatile border in terms of cross-border pastoralist conflicts over natural resources. The implementing agencies include the Agency for Technical Cooperation and Development (ACTED), which engaged in cross-border activities between bordering Pian pastoralist communities of Nakapiripirit district of Uganda and Pokot communities of North Pokot in West Pokot County, Kenya from 2007 to 2013. Veterinarians without Borders Germany (VSF-G) worked on cross-border activities between bordering Dodoth and Turkana pastoralist communities of Kaabong district in Uganda and Turkana North district in Kenya respectively, from 2008 to 2011 (See Map 1).

The two case studies were selected for this research because they are most similar in that addressing cross-border resource based conflict is a crosscutting issue within the adaptation approach adopted by the two agencies. Furthermore, the two agencies implemented two different community-based livelihood adaptation strategies that aimed to build resilience to climate change risks such as droughts and conflicts. However, the impacts on natural resource

122 The previous 46 districts of Kenya were regrouped into 47 counties as part of the decentralization process mandated by the 2010 Constitution of Kenya to create a second level of governance through county governments. As such, North Pokot district was incorporated into West Pokot County. See: Wikipedia, “Sub-counties of Kenya”, https://en.wikipedia.org/wiki/Sub-Counties_of_Kenya (Accessed on October 5th 2015)
conflict prevention are comparable as one approach was more effective than the other. On the one hand, ACTED sought to build community resilience to climate change risks through social networks. On the other hand, VSF-G adopted a conflict-sensitive approach to resource management approach that aims to eliminate competition over natural resources through resource sharing agreements.

This chapter further presents the methodological approach to this study in terms of the data collected and data collecting methods that were used, sampling and research location, and correcting practical issues around a sample group bias. Lastly, this chapter explains how the data was analyzed on the basis of the theoretical considerations of the research hypothesis.

![Map 1: Karamoja Cluster](image)

**Figure 1. Karimojong Cluster**

5.1 Data collection methods

The objective of this research is to understand the rationale for the cross-border DRR interventions that were implemented by two DRRAP development partners in the Uganda and Kenya borderlands, and identify specific attributes of these interventions that effectively contribute to resource conflict prevention among pastoralist groups. The choice of a qualitative case study method in this research is based on the nature of the research problem at hand and the fact that qualitative methods allow for the analysis of specific aspects within social settings in order to “share in the understandings and perceptions of others and to explore how people structure and give meaning (…)” to these settings. In this sense, the case study method allows for a better understanding of how a particular setting “operates or functions”.

A mix of secondary and primary data was used to gather information. Primary data was collected via six semi-structured interviews with key informants. Semi-structured interviews are considered appropriate to gain deep insights into the respondents’ perceptions and opinions as well as the values they place on respective approaches to livelihood adaptation and building resilience to climate change impacts. The process of unscheduled probing in semi-structured interviews allows for more elaborate insights into a specific issue and as well as deeper understanding of the respondent’s position on the former. Due to financial, time and safety limitations, it was not possible to travel to the targeted areas to conduct more in-depth field interviews and focus group discussions. Instead, interviews were conducted with a variety of key informants, including a peace practitioner who has been working within the region for over two decades, local NGO representatives, international NGO project field officers, field coordinators as well as programme coordinators. More precisely, I conducted interviews with a prominent veterinary officer turned peace practitioner who worked for African Union Interafrican Bureau for Animal Resources (AU/IBAR) during its substantive peacebuilding efforts in the region of study from late 1990s to mid 2000s. I considered him as a good informant because he had valuable insights on peacebuilding efforts between the Dodoth and Turkana as well as Pian and Pokot pastoralist communities as he is actively involved, up to today, in these initiatives. The Chief Executive Officer and Programme Coordinator of a local NGO called Lokichoggio Oropoi Kakuma Development Organization (LOKADO) were interviewed as the latter has been actively involved in cross-

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124 Ibid., p. 225.
125 Ibid., pp. 70-71.
border peace initiatives between the Dodoth and Turkana communities. I managed to interview the current VSF Germany Country Programmes Coordinator for Somalia and Kenya. The former field officer as well as field coordinator for ACTED’s cross-border project were also key informants for this study.

Secondary data was collected through an analysis of project reports from both development agencies that were disclosed to the public, which allowed for increased data reliability. Substantive information was collected from a detailed final project report for ACTED that was published on the FAO website. Data on both ACTED and VSF projects and approaches to Disaster Risk Reduction (DRR) was captured in documentation on ‘good practices’ found on the website of Oxfam founded Drylands Learning and Capacity-Building Initiative for Improved Policy and Practice in the Horn of Africa (DLCI). This is a policy-learning platform for ECHO-funded partners, which aims to give an overview of good practice examples in Disaster Risk Reduction within the Horn of Africa drylands. This website was key to gathering information as both implementing agencies do not disclose their final project reports to the public but rather keep them for internal purposes. Nevertheless, documentation on the DLCI website helped to gain an overall understanding of respective community-based approaches to DRR, which was further built upon during interviews with key informants.

5.2 Research location and sampling

Key informant interviews were conducted in Nairobi, Kenya between July 7th-16th, 2015 and one interview was conducted on August 7th 2015 in the Netherlands via Skype, as the last respondent is located in South Sudan. The interviews took place during an internship placement in Nairobi at the time, which facilitated contact and scheduled meetings with respondents in their offices in Nairobi. The interviews lasted on average two hours. This would have been a rather difficult task had I not been in the country at the time, as most respondents are mostly posted on field-based missions and were thus not reachable via Skype. Not to mention challenges of connectivity via phone and the costs incurred.

Sampling of the group of respondents was done through snowballing method. Indeed, a few key informants and contact persons were identified and asked to identify other potential key informants who were involved in the ACTED and/or VSF facilitated peacebuilding efforts among the respective pastoralist communities.
5.3 Limitations of the study

It is important to note here that the research may have yielded more substantial and non-biased data results, had the majority of the information been collected through other research methods such as focus group discussions and in depth interviews with individuals from the communities who were directly targeted by the projects. In this way, respondents may have been able to provide a less biased perspective on which specific approaches to adapting livelihoods and building community resilience to climate change contributed to restoring peaceful relationships among cross-border pastoralist communities. Oftentimes, it is likely that project team members fall victim of a self-serving bias when assessing their projects’ impacts. In addition to this, it was a challenge to connect with the former head of programmes and former project coordinator who managed the VSF Germany project along the Uganda and Kenya. Instead, the current program coordinator for Kenya and Somalia who joined the organization in 2012, a year after the project had ended, was interviewed. He had previously worked within the region under study and was able to provide valuable insights on certain issues. Nonetheless, efforts aimed to eliminate the selection bias included the incorporation of perspectives from local NGOs working within the region under study as well as a local peace practitioner with extensive peacebuilding experience who provided critical insights on the projects’ contributions to preventing resource-based conflicts.

5.4 Data Analysis

During the data analysis process, I classified the information in thematic categories that were consistent with both the interview questions (see appendix) and the theoretical concepts of the research hypothesis for this study. In the first phase of reducing and organizing the data, I classified relevant and detailed information according to thematic questions. In the second round of screening the fragments of data, I identified relevant information that was consistent with the empirical indicators of the theoretical concepts that this study aims to measure. This process of classifying the information into categories helped to understand and interpret patterns across the range of insights and perspectives provided by the informants and gathered from the project reports, and how they relate to the hypothetical explanation of the phenomenon under study. Ultimately, this helped to draw conclusions and build an argument around the subject of the study. The variables of the research hypothesis – building social capital and reducing the likelihood of climate induced resource conflict - will be measured in

the case study analyses based on the empirical indicators prescribed in the literature and presented in the theoretical chapter of this paper (see table 1).

6. Analysis

This chapter aims to test the theoretical argument of this paper, which claims that building social capital reduces the likelihood of climate induced natural resource conflicts. Building on chapter 2 that outlined the linkages between climate induced environmental change and communal conflict, this chapter first examines factors that mediate the relationship between resource scarcity and cross-border pastoralist conflicts in the East African drylands. It explains that protracted cross-border resource conflicts within the region are essentially caused by climate induced environmental degradation, demographic pressures as well as national land tenure policies that have undermined customary pastoralist institutions that govern access to grazing land and water resources in this region. The chapter provides insights into the EU’s Drought Risk Reduction plan for the Horn of Africa in order to elucidate how DRR interventions sought to mitigate drought-associated risks within vulnerable communities. Consequently, the chapter presents the two case studies of DRR projects implemented, within the ECHO DRRAP framework, in the volatile and conflict prone Uganda-Kenya border region. These projects adopt a community-based disaster risk reduction model to engage with and assist vulnerable communities to develop coping strategies for recurrent drought. Throughout the analysis process, the aim is to scrutinize the different community approaches adopted by two DRRAP implementing agencies to build resilience to recurrent drought, and identify specific attributes of these interventions that effectively contribute to natural resource conflict prevention in the region under study.

6.1 Pastoral livelihoods and conflict in the drylands in the Greater Horn of Africa

Before delving into the issue of inter-communal ethnic conflicts in the borderlands of the Greater Horn of Africa region, it is important to briefly address pastoral livelihood systems, in order to get a clear understanding of how these livelihoods are sustained in times of climatic stress. Subsequently, this chapter explores in further detail the structural dynamics that mediate the relationship between environmental degradation and inter-communal conflicts among the East African pastoralist communities thereby further undermining pastoralist livelihoods. Lastly, the section discusses the nature of these communal conflicts.
6.1.1 Transhumant pastoralism: non-exclusive property rights and livestock mobility

Pastoralism is considered one of the main production systems in the world’s drylands and is referred to as “the use of extensive grazing on rangelands for livestock production”.

According to FAO, pastoralism is practiced across different regions of the world from Central Asia to the Andean and larger parts South America, and from some parts of Europe to the Sub-Saharan Africa region. Rangelands and drylands share the same characteristics but mountain rangelands cannot be considered as such. Drylands are characterised by areas that witness unpredictable weather conditions, including a high level of uncertainty in amounts and range of rainfall between years, which consequently leads to erratic patterns of pasture growth and uncertainty around access to these pastures. By definition, the unstable ecological nature of drylands determines the type of pastoralism that is viable in these kinds of regions; that is, a system of pastoralism that is able to adapt to this level of uncertainty. Essentially, variability of seasonal pastures in dryland areas forces pastoralists to manage their resources by moving to areas where the resources are plenty and available, while concurrently adjusting herd sizes such that they can sustain the inter-annual availability of those resources.

Pastoralism is generally categorized according to the degree of movement, from highly nomadic pastoralists, to transhumant and agro-pastoralists.

Transhumant pastoralism is practiced in the arid and semi-arid regions of the Greater Horn of Africa (see Map 2). It refers to production patterns whereby pastoralists have permanent settlements from which they engage in crop production for their own subsistence and personal use. But at the same time, the animals are taken out in search for grazing pastures to ensure production and reproduction of pastoral products for the market. As such, scholars have noted

128 Ibid.
129 Ibid.
131 Arid and semi-arid lands are defined as regions that receive rainfall within the range of 0-300mm and 300-600mm respectively. These areas are not suitable for cultivation due to short periods of pasture growth, between 1-74, and 75-119 days respectively. See: International Fund for Agricultural Development (IFAD), “The Rangelands of Arid and Semi-Arid Areas”, http://www.ifad.org/lrkm/theme/range/arid/arid_2.htm (Accessed on 29th September 2015)
the importance of livestock mobility as a key strategy to deal with “ecologically specialised and seasonally varied grazing lands and water holes” to provide a safety net against the unreliable rainfall patterns and variability of resources.\textsuperscript{132} Rangeland ecology theorists such as Roy Behnke further extend this view. He states that pastoralists in African rangelands have a ‘responsible’ resource management system in that their livelihood framework encourages mobility and therefore regulates access to natural resources and the extent to which the latter are used.\textsuperscript{133} In other words, “non-exclusive land tenure arrangements, which make mobility possible” in African rangelands are essential to sustaining pastoralist livelihoods as they enable extensive land use for grazing. Since land and property rights belong to all groups within a pastoralist setting, the latter can alternate usage of one another’s territory for grazing in a reciprocal manner as long as these territories can cater to the food provision needs of their livestock species.\textsuperscript{134}

Furthermore, scholars that have studied the ethnological history of East African pastoralist groups argue that these groups had special mechanisms of organizing themselves during times of disasters that exacerbated resource scarcity, such as droughts, epidemics or famines. Drawing upon a study on the social and economic organization of East African pastoralist groups across the Kenya and Ethiopian borders, Neil Sobania contends that pastoralists established reciprocal trade linkages with other communities within the vicinity of their neighbourhoods. These communities exploited various natural and human labour resources and successfully ensured that their social needs were met.\textsuperscript{135} As a result of trade relations and the sharing of grazing areas between herdsmen from different neighbourhoods, “bond-partnerships” emerged as pillars for the free exchange of commodity goods.\textsuperscript{136} In sum, pastoralist groups had a range of subsistence options, including widely specialized ecological niches with different kinds of natural resources to support livelihoods, coupled with economic and social ties between groups, which lent a degree of stability within the region.\textsuperscript{137}


\textsuperscript{134} Ibid., p. 9.


\textsuperscript{136} Ibid., pp. 133-134.

\textsuperscript{137} Ibid., pp. 137-138.
In conclusion, non-exclusive property rights that govern land use in the East African drylands enable sustainable pastoralist livelihoods as they allow for livestock mobility. Indeed, non-exclusive land use arrangements regulate access to and use of natural resources and are thus a coping mechanism in these ecologically fragile environments that witness low resource availability. Furthermore, in times of resource scarcity due to adverse climatic events, pastoralist groups maintain their subsistence levels by engaging in economic trade linkages as well as social partnerships that ensure free exchange of commodity goods and services. These kinds of partnerships emerge from prolonged contact with one another while grazing in the same areas.
Map 2: The Greater Horn of Africa region

6.1.2 Discriminatory land tenure policies, environmental degradation and cross-border pastoralist conflicts

The Greater Horn of Africa covers Ethiopia, Djibouti, Eritrea, Kenya, Somalia, Sudan, South Sudan and Uganda. These countries, except Eritrea, are members of a regional institution called the Intergovernmental Authority for Development (IGAD). The Greater Horn of Africa covers Ethiopia, Djibouti, Eritrea, Kenya, Somalia, Sudan, South Sudan and Uganda. These countries, except Eritrea, are members of a regional institution called the Intergovernmental Authority for Development (IGAD). They are among the poorest in the world as they fall within the low human development category of the Human Development Index (HDI) established by the United Nations Development Programme (UNDP). According to the HDI for 2011, the IGAD countries are ranked at the bottom of the index with scores of 0.446 for Uganda, 0.408 for Sudan, 0.430 for Djibouti, 0.363 for Ethiopia, 0.349 for Eritrea and Kenya ranking 143rd of the 187 countries with a score of 0.509.[138] Furthermore, the IGAD member states are largely agricultural economies. According to Knips’ study, livestock contributes on average 57% to the agricultural sector and overall between 15 to 20% to the GDP of the IGAD countries. Knips contends that the livestock sector is crucial in this region and the “most viable form of land use” since 60% of the land in this region is arid[141] making it unsuitable for cultivation. Sanford and Ashley argue, however, that with significant pastoral and agro-pastoral populations, 17% of the population that inhabits the IGAD region are engaged in pasture-based production systems and approximately 61% of livestock-keepers within the region, also referred to as pastoralists, are poor.[143]

[139] UNDP defines the Human Development Index is a “composite index that measures the average achievements in a country in three basic dimensions of human development, which include a long and healthy life; access to knowledge, and a decent standard of living”. The indicators of these dimensions are “life expectancy at birth, adult literacy and combined gross enrolment in primary, secondary and tertiary level education, and gross domestic product (GDP) per capita in Purchasing Power Parity US dollars (PPP US$)”. Furthermore, the human development classifications are threefold: high human development with HDI of more than 0.800, medium human development with HDI of 0.500-0.799, and low human development with HDI of less than 0.500. See: UNDP (2007), “Fighting Climate Change: Human Solidarity in a Divided World”, Human Development Report 2007/2008, pp. 221-225. Available at: http://hdr.undp.org/sites/default/files/reports/268/hdr_20072008_en_complete.pdf (Accessed on 28th September 2015)
[141] Arid refers to areas that are highly variable in rainfall, receiving less than 500mm of rainfall annually and having a growth period for plants of less than 90 days. See: Knips (2004).
In addition to chronic poverty that persists within the subsistence economies of the Greater Horn of Africa, the region is also significantly affected by its vulnerability to environmental degradation. The region has witnessed rising temperatures, erratic rainfall and the large arid and semi-arid areas that embody this region have “faced rapid rates of degradation, in the form of frequent occurrence of droughts, deforestation, loss of vegetation and biodiversity, increased soil erosion, desiccation and desertification”, as well as recurrent famines and rampant food insecurity.\textsuperscript{144} Indeed, Kenya and Ethiopia have faced about ten major droughts between 1980 and 2011, while Uganda and Djibouti endured eight, and Somalia and Sudan suffered seven and six droughts respectively during this period.\textsuperscript{145}

Drawing on empirical evidence, Mengisteab contends that scarcity induced by environmental degradation prompts livelihood groups to violate customary land tenure arrangements that govern the allocation and use of resources in pastoralist settings. Indeed, in times of drought, herding groups graze their livestock in areas that they do not have access to, thereby provoking competition over resources among pastoralist groups.\textsuperscript{146} In this sense, competition over access to grazing land and water, as a result of poor resource management, would cause communal conflicts among pastoralist groups and between pastoralist and farming groups - as witnessed in the case of Darfur in Sudan.\textsuperscript{147} He further argues that in addition to environmental degradation, other stressors also indirectly contribute to resource scarcity, including population growth and national land tenure policies that undermine the rights of marginalized rural groups to land.\textsuperscript{148}

On the basis of Mengisteab’s analysis on scarcity related conflicts in the Horn of Africa, one can contend that structural dynamics that engender resource scarcity are the primary source of inter-communal pastoralist conflicts. These structural factors include climate induced environmental degradation, demographic pressures and national land policies that do not support the effective management of land, and as a result, lead to land degradation. This argument relates to the narrative in the literature that was presented in chapter 2, which states that climate induced environmental change interacts with and exacerbates socio-economic and political challenges that communities are already facing, which altogether drive violent conflict.

\textsuperscript{144} Mengisteab, K. (2014), op. cit., p. 16.
\textsuperscript{145} Ibid., pp. 153-154.
\textsuperscript{146} Ibid., pp. 172-173.
\textsuperscript{147} Ibid., p. 153.
\textsuperscript{148} Ibid., p. 173.
Building upon the above-mentioned argument on structural causes of resource conflicts within the Horn of Africa region, scholars contend that the colonial legacy that imposed artificial boundaries of new states to facilitate administrative order, distorted the social fabric of pastoralist societies in the region. As previously discussed, the pastoral livelihood system is based on the imperative of free movement of livestock across large areas of land in order to sustain their livelihoods. As part of the colonial legacy, tribal territories were created and provincial boundaries were drawn which forced pastoralists to remain confined in their designated tribal settlements and by default, “tribal grazing lands”. As Sobania rightly states, “imposition of grazing boundaries had the greatest impact, as once relatively fluid societal boundaries became crystallized.” As a result, restricted contact “resulted in their mutual isolation and the withering of their trading ties.” Furthermore, confinement into these tribal grazing areas strengthened a sense of group identity and communal ownership over pieces of land that did not tolerate outside encroachment.

Furthermore, development approaches that followed for instance in Uganda in the 1940s favoured cultivation over pastoralism and sought to encourage pastoralists to adopt different livelihoods by relocating these groups to ‘high-potential’ areas that were previously reserved for dry season pastoralist grazing. Encroachment on land reserved for livestock production largely undermined the production patterns of pastoralists that were consistent with seasonally specialized environmental niches, which provide various needs to livestock species. These developments led to the constriction and degradation of the pastoralist zone due to “livestock congestion, resulting in overgrazing and growing prevalence of cattle diseases.” Recent scholarship on land degradation extends this argument in stating that land degradation in the East African drylands - where land is a productive asset that pastoralist livelihoods depend upon - is increasingly attributed to the restriction of mobility and the breakdown of locally-owned institutions for land management. During the post-independence period in the

151 Sobania (1991), op. cit., p. 139.
152 Ibid.
154 Ocan (1994), op. cit., p. 126.
Greater Horn of Africa region, pastoralist groups were further sidelined from national economic development agendas as states followed the colonial blueprint by expanding commercialized agriculture and irrigation practices into the pastoralist zones.\textsuperscript{157}

Against this backdrop, cross-border inter-communal conflicts have plagued the Horn of Africa region for decades as ethnic pastoralist groups migrate across international borders and ethnic boundaries in response to increasingly scarce environmental resources, and engage in a violent struggle over access to grazing land and water resources. In most cases, these violent conflicts manifest as livestock theft - also referred to as cattle rustling or raiding - as pastoralist groups seek to replenish their herds of livestock that were depleted by long periods of devastating droughts.\textsuperscript{158}

Traditionally, cattle raids were sanctioned and organised by the elders in a community as a joint effort and carried out by young warriors. These raids had two objectives. One was to protect and ensure the survival of the herd of livestock. The other was done in a more offensive manner to restock depleted herds by increasing its size and the owner’s grazing territory. Since livestock is the asset base of pastoralist livelihoods, social relations and affluence in a community are defined by cattle wealth and one’s ability to increase his stock.\textsuperscript{159} One of the strategies employed in the conduct of cattle raids, is to create a ‘no man’s land’ around their respective ethnic territories that demarcates a zone, which defines how much area is available to a given community for grazing their animals but also allows distance for conducting raids against the enemy. Much of this land thus becomes underutilized as respective communities surrounding it remain confined in their portions of land by fear to engage in a violent struggle over those resources. This ultimately leads to overgrazing and land degradation. As vital natural resources are depleted, Ocan argues that “the struggle to control and dominate this area is the crux of the conflict between warring parties.”\textsuperscript{160} Since the early 1980s, the nature of these conflicts has changed in dynamics and


\textsuperscript{159} Ocan (1994), op. cit., pp. 127-128.

\textsuperscript{160} Ibid., p. 128.
became more violent and extensive in scope. Raids are no longer conducted as a community effort to maintain an optimal size of a heard size in order to ensure survival from livestock products such as milk and meat. Rather raids are conducted by youth for more individualistic and opportunistic reasons due to the market incentive to sell livestock in exchange for income and more weapons. The acquisition of modern automatic weapons in these pastoralist zones - mainly through the State government but also through insurgent movements - has expanded the extent of the raids as young warlords cross national boundaries to engage in these activities. These shifting dynamics have led to the rise of young warlords that benefit from large-scale theft and have thus undermined the role of community elders in sanctioning cattle raids.¹⁶¹

In summary, this section has illustrated that cross-border pastoralist conflicts in the Horn of Africa region are essentially driven by scarcity of resources namely grazing pasturelands, water resources and livestock. While climate change induced environmental degradation acts as a trigger for resource conflicts among pastoralist groups, other intervening stressors such as socio-political and economic factors contribute to resource scarcity within the region. This argument relates to the narrative in the literature presented earlier in this paper, which states that socio-economic vulnerability to climate induced resource scarcity drives violent natural resource conflicts. In the case of cross-border pastoralist conflicts, the socio-economic vulnerability of pastoralist groups stems from national land policies that undermine the need for the effective management of land and other resources in order to sustain pastoral livelihoods. Indeed, the cumulated effect of imposed administrative borders by colonialists and the promotion of cultivation at the expense of transhumant pastoralism led to the confinement of these groups in permanent grazing settlements. Territorial confinement put a strain on their ability to cope during droughts by migrating across large territories in search for pastures and water for their livestock, and maintaining economic and social ties with neighbouring groups in order to ensure subsistence needs in times of resource scarcity. Instead, restricted mobility over the past decades has led to hastened environmental degradation due to overstocking of animals and overgrazing in confined lands. As a result, depleted vital natural resources coupled with the environmental impacts of climate change, force pastoralist groups to engage violently with one another as they migrate and struggle for control over remaining resources in underutilized areas. Pastoralist groups engage in violent cattle raids – cattle rustling - as a means to replenish their depleted stocks of animals after long periods of severe drought. Furthermore, young warriors are increasingly engaging in

violent raids as they seek opportunities to earn an income through the livestock and small arms trade markets.

6.2 EU Drought Risk Reduction Plan for the Horn of Africa

The EU initiative to tackle the issue of recurrent droughts and climate issues in the Horn of Africa grew out of observations of the challenges that governments and communities faced in dealing with onset disasters such as drought. The core of the EU external humanitarian interventions policy in the Greater Horn of Africa is to address underdevelopment, which is considered the main cause of increased vulnerability of communities in the face of recurrent drought. The EU states that weak governance on drought preparedness at national and community levels increases vulnerability of local communities to the risk of drought.

In view of the prospects of development initiatives for the pastoralist region, the EU’s first Regional Drought Decision (RDD) in 2006, aimed to mitigate the effects of drought in the Horn of Africa by linking humanitarian aid to development assistance. The DG ECHO funded regional drought preparedness and drought response interventions across the region, which took a preventive tone and targeted up to 12 million pastoralists. However, in the context of recurrent and chronic droughts within a shorter time span of 2-3 years, DG ECHO adopted a new decision in 2008 to manage the drought cycle by promoting community-based knowledge on drought preparedness and response through livelihood support in terms of water management, animal and human health. The drought crisis in the Horn of Africa region in 2011 that was exacerbated by the mass displacements and conflicts culminated in a shift in ECHO’s drought emergency interventions. ECHO’s approach shifted towards initiatives for building drought resilience and sustainability, and seeking innovative and preventive measures to reduce vulnerabilities of local communities to climate change impacts.

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This approach was officialised under the DRRAP in 2010, which was funded until 2013. A consortium of non-governmental development partners implemented this project in Djibouti, South Sudan, Ethiopia, Kenya and Uganda.

6.3 The Community Managed Disaster Risk Reduction (CMDRR) Model

In view of the scope of activities covered with the DRRAP, the Community Managed Disaster Risk Reduction (CMDRR) model, inspired by efforts within the development field to nurture empowerment, was adopted to facilitate a more focused analysis of community vulnerabilities to disasters in disaster risk reduction programs. It was considered as an appropriate disaster management tool for systematically enhancing community resilience in the disaster-prone Horn of Africa region. In this sense, the approach is also closely linked to the Hyogo Framework for Action 2005-2015, which advocates for community participation in disaster reduction plans.

CMDRR aims to raise awareness on the risks that communities face through a participatory disaster risk assessment process that brings together various members of a community, including traditional elders, community members and local government officials. A selected committee of members are at the centre of the participatory process. The awareness of risk is then used to empower communities to reach a consensus on a management decision to mitigate the risk if it is not manageable or to plan risk reduction measures that help them become more resilient and able to prepare for hazards. The organization facilitating the process puts emphasis on potential development projects but also on improving group cohesion, mobilising community resources and liaising community plans with government institutions.

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In light of the different interpretations of the concept of resilience among DRRAP implementing partners, the latter utilized different approaches to facilitate community drought preparedness and drought contingency planning. These include a wide variety of initiatives such as water development, natural resources management, savings groups, trade groups, pastoralist field schools, community-based early warning systems as well as conflict sensitivity and mitigation measures. Furthermore, the implementing agencies utilized different entry points. In view of the wide scope of drought resilience-building initiatives, the next section aims to examine the cross-border approaches implemented by ACTED and VSF Germany in particular and examine the specific attributes of the interventions that effectively contributed to preventing cross-border pastoralist conflicts over vital resources.

6.4 CMDRR Interventions: building community resilience through social networks in the Pokot and Karamoja borderlands

ACTED began livelihood-based interventions along the Uganda-Kenya border between Pokot and Pian communities in 2007. The Pokot live in North Pokot district in Kenya as well as in the newly created Amudat district of Uganda, as North Pokot was part of Ugandan territory, until a 1972 inter-governmental land concession pact. The Pian largely occupy neighbouring Nakapiripirit district (see Map 1). As pastoralist and agro-pastoralist communities, these groups depend largely on herding livestock as the low rainfall levels reduce soil moisture making the drylands unsuitable for agricultural activities. During the dry seasons, these herding groups are forced to migrate in order to access water resources and green pastures that would ensure survival of their livestock. Traditionally, the Pokot from Amudat and North Pokot districts and the Pian would migrate to the southern parts of West Nakapiripirit and Amudat districts and graze their livestock together (see Figure 3). However, recurrent conflicts and insecurity within the region, coupled with policies of the Ugandan government in favour of agricultural production and permanent settlements of nomadic populations, have hindered these communities from utilizing these migration patterns. As a result of restricted access to resources and other stressors such as demographic growth, proliferation of small arms and underdevelopment, livestock raids have evolved into large-

169 Amudat was previously part of Nakapiripirit district, as illustrated in Map 1, before it became a district of its own.
scale violence. However, the Ugandan government’s military-led forcible ‘cordon and search’ disarmament operations between 2006 and 2007 were largely successful in scaling down violent raids between the Pokot and Pian, as the number of armed attacks reduced in Karamoja.

Against this backdrop, ACTED received funding from different sources namely FAO and DanChurch Aid to engage in livelihood-based interventions. The peace process that aimed to prevent conflict over resources in high potential grazing areas started in 2007. The goal here was to build trust between the facilitators and the communities through years of community engagement before peace talks were introduced in 2009. Indeed, after forceful civilian disarmament was completed this left a gap as warring communities were denied the gun, which they used to restock their depleted herds and ensure their livelihoods (food and wealth) after long dry seasons. Moreover, they did not have alternative livelihoods as they were uneducated and could not be employed. As one respondent concurs:

“You cannot change someone’s traditional livelihood within a day, it needs a lot of time, attitudinal change, mental change, trainings, creation of awareness and the alternative ways of making wealth. So after disarmament, people had to turn to development. But they did not know where to start.”

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171 Bevan, J. (2008), op. cit., pp. 55-60. It is important to note here that despite the resulting recovery of large amounts of small arms, these disarmament operations were heavy-handed and created despicable human rights abuses to vulnerable communities and, with the increase of military presence, led to an increase in demand and recirculation of weapons.

172 Interview with Darlington Akabwai, Field Veterinarian and peacebuilding practitioner in the Karamoja region, Nairobi, 7th July 2015; Interview with Michael Mangano, Former Area Coordinator in Cross-Border Uganda-Kenya Project at ACTED, 7th August 2015.

173 Interview with Jacob Logilai, Field Officer for Cross-Border Kenya-Uganda Project at ACTED, Nairobi, 16th July 2015
Figure 3: Migration patterns in Nakapiripirit and Amudat districts along the Uganda-Kenya border drawn by the United Nations Office for the Coordination of Humanitarian affairs (OCHA).


6.4.1 Livelihood adaptation through experience-based learning

Community engagement was initiated through livelihood resilience initiatives such as the umbrella institution of “Pastoralist Field Schools”. These institutions were promoted under FAO funding in the view that the pastoralist livelihood system was complex. Faced with variable environmental conditions due to climate change, pastoralists needed to supplement and improve their traditional livestock production system and rangeland ecosystem management skills in order to build resilience to changing climatic conditions. Activities here were based on participatory approaches through which pastoralists “learn by doing”, that

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is, through experimentations in an effort to analyze “their livelihood systems, identify their main constraints and to test possible solutions.” By extension, these groups would be able to identify and adopt the best livelihood technologies and practices which ensure more productivity, profitable gains and adaptive capacity to climatic hazards, which are all essential to their livelihood needs.\(^\text{175}\)

Since the targeted communities were (agro) pastoralists, ACTED formed Agro-Pastoral Field Schools (APFS) of about 20-30 community members with a 50-50-gender balance\(^\text{176}\), within the communities of interest on both sides of the border. The aim was to create an open forum for dialogue on their livelihood challenges, prioritize their problems and seek potential solutions through discovery-based learning. Participants included community elders, women and youth. In most cases, participants identified challenges of animal disease, impacts of recurrent drought on farming, and would ultimately explore mechanisms for ensuring their food security. For instance improving animal health through specific feeding supplements and cross-breeding in a way that body size is enhanced as well as the animals’ market value for milk and meat products. Also, maximizing output from small farming practices (i.e organic manure) that could serve for personal use but also be sold at markets.\(^\text{177}\) Furthermore, members of the APFS network were introduced to village banking initiatives under the Village Community Bank (VICOBA) structure, which were key in sensitizing communities on the benefits of savings and loans in times of droughts and other shocks. Through the APFS network, communities gained knowledge of income generating support activities such as savings and loans that help to build adaptive capacity and enhance resilience to climate change risks. For instance, when a livestock’s body size is market-friendly, APFS members could sell it at a livestock market and bank the proceeds with VICOBA.\(^\text{178}\)

In relation to the conceptual framework of this paper, one can argue that the dissemination of skills and knowledge through the APFS network enhances household resilience to cyclic droughts. While the APFS structures provide new skills and knowledge, they also create

\(^\text{175}\) Ibid., p.4.
\(^\text{177}\) Interview with Jacob Logilai, Former Field Officer for Cross-Border Kenya-Uganda Project at ACTED, Nairobi, 16\(^\text{th}\) July 2015
economic opportunities to diversify financial resources. As such, APFS effectively expand the range of livelihood assets that help to respond to severe drought. In this view, one respondent contends that:

“Breaking away from the traditional pastoral lifestyle is part of the approach. By having diversified livelihoods, they rely less on the cattle that they love so dearly. And it kind of builds a bit more resilience by having an alternative source of feeding one’s self.”  

### 6.4.2 Cross-border exchange visits: the ‘cornerstone’ for relationships of trust

While the above-mentioned resilience-building activities vis-à-vis the risks of recurrent drought were successful, ACTED initiated cross-border programming in 2009 to address conflict dynamics between the bordering communities. Having anchored community engagement within APFS, ACTED sought to engage the neighbouring communities of interest in dialogue through a set of three exchange visits on both sides of the border. During these visits, members of the APFS network discussed their livelihood experimentations, the challenges, realised outcomes and recommendations for replication. A group of 4-5 selected representatives from each community took part in these visits. This was an important step in the peace process in terms of improving the relationships among divided communities as it allowed for a better understanding of one another and to break down barriers. For instance, respondents recalled the experience during an exchange visit of a Pokot woman, who had her arm amputated from conflict and was not a fan of the Pian, saying that the Pokot used to equate the Pian to animals. But after the meeting she realized that both communities were similar and had a lot in common.

Respondents observed that these exchange visits were a building block for peace as they gradually built trust and confidence among counterparts. More importantly, respondents note that in fifty percent of the total encounters communities established trade linkages in

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179 Interview with Michael Mangano, Former Area Coordinator for Cross-Border Uganda-Kenya Project at ACTED, 7th August 2015.  
181 Interview with Michael Mangano, Former Area Coordinator for Cross-Border Uganda-Kenya Project at ACTED, 7th August 2015; Interview with Jacob Logilai, Field Officer for Cross-Border Kenya-Uganda Project at ACTED, Nairobi, 16th July 2015
these meetings. For instance, participants would discuss how they could engage in cross-border trade with each other at mutual market points.\textsuperscript{182} As such, trade linkages constitute a milestone in the peace process as they instil “an economic incentive to cooperate more”.\textsuperscript{183} Furthermore, throughout the exchange visits, APFS members would report back to their communities on their discussions with their fellow counterparts.

In line with the conceptual framework of this paper, one can argue that exchange visits among members of the APFS enhance resilience in two ways. On the one hand, exchange visits nurture a social learning process that shapes and influences a change of behaviour among parties involved. Indeed, inter-community interactions help to empower individuals to realize that their communities are interdependent on one another in terms of the survival of their livelihoods. On the other hand, exchange visits foster adaptive capacity as they create social linkages and trade opportunities among individuals. Indeed, exchange visits serve as a channel for a mutually beneficial exchange of commodity goods as individuals within the APFS network acquire the skills and knowledge on how to manage resources and cultivate alternative livelihood strategies. The underlying positive change of attitude within the APFS network thus prevents conflict as the perceived stereotypes of one another are eliminated and individuals involved appreciate one another as economic partners.

\textbf{6.4.3. Conflict resolution through negotiated resource-sharing agreements}

Once communities were comfortable enough to interact with each other in small groups, the project facilitators introduced the contentious issue of resource sharing in a contested buffer zone that covers high potential grazing lands and water resources and is subject to violent raids. The APFS community members agreed that a solution would be to jointly settle into these contested areas and draft a binding agreement on how to share and use the resources. The crucial point here is that the Pian and Pokot communities have to come up with ideas themselves in order to take ownership of the process. As facilitators, ACTED staff helped to convince participants to agree in principle that they should use the resources more effectively and generally without attacking each other, while working together to get the most out of the resources. Hence, APFS engaged in planning the rotation of dry season grazing areas in a third exchange visit. This entailed mapping out the migration patterns during the different

\textsuperscript{182} ACTED (2013), op. cit., p. 14.
\textsuperscript{183} Interview with Michael Mangano, Former Area Coordinator for Cross-Border Uganda-Kenya Project at ACTED, 7\textsuperscript{th} August 2015
seasons, as well as resources such as grasslands for feeding the cattle and water points like rivers or man-made/naturally formed water pans. As such, this provides an overview of where groups come across each other.\textsuperscript{184} Following intensive engagement with their respective communities on the proposed resource maps which led to the approval of their community elders on the tentative resource-sharing agreement, both counterparts within APFS network called for a fourth meeting. During that gathering, the trained members of the community APFS, however, emphasized that they were trained as a group on livelihood resilience and had agreed to settle into the contested grazing areas and share the resources peacefully. This lent a sense of mutual understanding around the issue of sharing contested resources, and as a result, elders from both communities came to an agreement on a final draft, which was signed in April 2012 under the auspices of government officials and security forces who would monitor the reinforcement of the agreement. In addition, the traditional leadership structures (elders) supported the agreement by setting sanctions and rules for compensation in case of incidents of cattle raids.\textsuperscript{185}

Currently, the Pian and Pokot communities have resettled into previously conflict affected areas such as Moruita (see Figure 3) and are integrated through joint livelihood activities. By extension, ACTED identified livestock markets within the region to encourage respective communities to seek trade opportunities for exchanging their goods.\textsuperscript{186} These peace agreements have thus increased trade in livestock and livestock products.\textsuperscript{187} However, respondents observed some key challenges with regard to strengthening the peace process. These include a more-effective joint resource management planning to prevent an overlap in resource use during annual migrations, which would reduce the risk of conflict. This task was handed over to the government due to a lack of funding, but the plans need to be reviewed. Another challenge in the same respect was weak sensitization campaigns for the peace agreements, as the key information related to the former needs to be effectively and widely disseminated to communities by their leaders. Nevertheless, this depends on the sense of responsibility of the leaders in being messengers for peace. \textsuperscript{188}

\textsuperscript{184} Ibid.
\textsuperscript{185} Interview with Jacob Logilai, Former Field Officer for Cross-Border Kenya-Uganda Project at ACTED, Nairobi, 16\textsuperscript{th} July 2015
\textsuperscript{186} Ibid.
\textsuperscript{188} Interview with Michael Mangano, Former Area Coordinator for Cross-Border Uganda-Kenya Project at ACTED, 7\textsuperscript{th} August 2015
In sum, one can argue that sustained engagement of APFS members through cross-border exchange visits also created an opportunity to address the issue of conflict over contested dry season grazing areas through dialogue. Indeed, APFS networks give communities collective responsibility of the issues affecting their communities and empowers them to find solutions that are in their mutual interest. Following this logic, sustained inter-community dialogues thus led to a mutual understanding that it was necessary to collaborate to effectively share and make good use of contested grazing lands. In relation to building adaptive capacity and resilience, new ideas and values that channelled through the APFS network were disseminated within respective communities through a process of information sharing, which ultimately promoted a change in behaviour and values. This, in turn, facilitated the signing of resource sharing agreements to access key resources. In this regard, one respondent accurately noted that:

“The moment people interact, there will be a cohesiveness in the community. (…) And people rely on themselves when their economy is concerned; nobody will ever in the future think of attacking and fighting. Because his or her way of life will be disrupted.”

It is also important to note that resource-sharing agreements, which are also referred to as resource access institutions, allow for better pastures and healthier livestock and this maximizes income from trade opportunities for livestock and livestock products.

### 6.4.4 Summary

Based on this overview of ACTED’s cross-border approach to building livelihood resilience to drought, one can argue that building social capital through the APFS network - an entry point for CMDRR interventions - was instrumental for conflict prevention on two levels.

On the one hand, APFS structures provided a platform for communities to identify and prioritize the livelihood challenges that the community faces as a whole, and at the same time, learn and share knowledge on how to diversify their livelihoods in order to overcome drought associated risks. This helped to expand their livelihood options and bolster their capacity to respond directly to severe drought. Sustained inter-community interactions within the framework of exchange visits among APFS members, nurtured a social learning process that

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189 Interview with Jacob Logilai, Former Field Officer for Cross-Border Kenya-Uganda Project at ACTED, Nairobi, 16th July 2015
shaped and influenced a change in attitudes and values among parties involved. Indeed, inter-community interactions raised group awareness that the survival of their livelihoods in the face of drought emergencies was dependent on relational ties with one another. This was an incentive to engage in mutually beneficial trade partnerships, which in turn, enhanced social capital and secured financial resources.

On the other hand, the APFS framework created a forum for addressing conflict over access to fertile grazing areas that were underutilized due to insecurity. As prescribed in the literature on adaptive capacity and resilience, collaborative relationships within networks that are built on trust allow for the replication of new values, norms and practices within society as a whole. With regards to the case of the Pokot and Karimojong pastoralist groups, a few selected members of the APFS network engaged intensively with their respective communities on draft resource sharing maps that were elaborated within the network. This encouraged their respective communities to collaborate collectively with their adversaries on the issue of resource sharing and conflict resolution. In light of mutual agreements on resource sharing, one can thus argue that APFS networks also facilitate access to key natural resources that are essential for pastoral livelihoods.

In conclusion, this overview has demonstrated that the underlying institutional framework that ACTED established to support livelihood adaptation and resilience to the impacts of drought, effectively contributed to preventing cross-border conflicts between the Pian and Pokot pastoralist groups over natural resources. Indeed, the APFS network strengthened inter-community interactions that were characterized by a sense of mutual dependence and active collaboration among counterparts with the aim to diversify their livelihoods in the face of chronic drought. As a result, these dynamics fostered a positive change of attitudes among pastoralist groups towards peaceful coexistence.

6.5 Conflict-sensitive approach to building community resilience in the Turkana and Karamoja borderlands

Contrary to ACTED, VSF Germany began cross-border peacebuilding activities along the Uganda-Kenya border in 2008 and adopted a conflict-sensitive approach aimed to facilitate access to conflict prone dry season grazing lands. However, this approach faced some challenges with regard to preventing cross-border conflict between the Turkana and Dodoth pastoralist groups over these resources. This chapter aims to first outline the background
context of the project as well as the rationale for the conflict-sensitive ‘Do No Harm’ approach adopted by VSF Germany in the pastoralist borderlands of interest. Lastly, the chapter examines the limitations of this approach with regard to natural resource conflict prevention.

### 6.5.1 Facilitation of reciprocal grazing agreements through customary institutions

VSF Germany’s cross-border resilience-building activities along the Uganda-Kenya border were funded within the framework of the European Commission (EC) Drought Management Initiative (DMI) that was commissioned for the Delegation of the European Union to Kenya. This financing agreement with the government of Kenya was facilitated through the 9th European Development Fund\(^{190}\), and while still part of the DRRAP, the project was initiated with the view to complement previously funded DG ECHO-funded drought preparedness projects in the north-western parts of Kenya. The three-year programme (2008-2011) implemented by a consortium of five NGOs, including VSF Germany and Oxfam\(^{191}\), aimed to improve the “effectiveness and efficiency of drought management systems in Kenya.”\(^{192}\) As such, DMI was implemented within the framework of the Kenyan government’s Arid Lands Resource Management Programme (2003-2010) funded by the World Bank. This programme sought to promote natural resource and drought management initiatives that would bolster capacity for conflict management over contested access to scarce natural resources through dialogue between pastoralist groups. Another component of the programme was to improve preparedness and resilience to drought emergencies through early warning systems and drought contingency planning.\(^{193}\)


Considering DMI’s objective to support natural resource management and drought preparedness for improved adaptive responses to droughts, VSF Germany, as an implementing agency for the project, sought to revive customary pastoralist institutions that facilitated dialogue and negotiations on contested grazing lands and water resources. This traditional conflict mechanism usually culminated in mutual agreements for resource sharing. Indeed, traditional peace agreements were followed by the ‘burying’ of weapons of war (spears, bows and arrows) and were additionally sanctioned with the power of community traditional elders to spell a curse on whoever broke the agreement. As such, traditionally settled agreements allowed for flexible migration patterns in order to gain access to resources.

In view of this contextual background, VSF Germany considered that resource-sharing agreements that are facilitated through customary institutions are crucial in building community resilience to drought as they provide property rights for shared and under-utilized resources, thereby contributing to an essential part of pastoralist coping strategies for drought. In addition to strengthening the adaptive capacity and resilience of communities to the risk of drought, these agreements also allow for peacebuilding and strengthen socio-economic cohesion among pastoralist groups. In order to ensure a successful facilitation of reciprocal grazing agreements, VSF Germany utilized a participatory and conflict-sensitive approach, which aimed for a holistic analysis within communities of their livelihood needs in order to foster mutual understanding on these issues. This level of empowerment would lead to conflict-sensitive solutions such as resource-sharing plans with neighbouring communities.

6.5.2 The ‘Do No Harm’ approach: inter-community dialogue and attitudinal change

The ‘Do No Harm’ concept was initially developed in the late 90s for development aid agencies working in conflict contexts as a means to ensure that development planning is conflict-sensitive such that it does not have adverse impacts on the local context itself. However, VSF Germany utilized this principle as a tool for facilitating peace dialogue.

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195 Ibid., p. 2.

between communities, as well as to channel a change of attitudes among parties involved towards peace.\textsuperscript{197}

The general idea was to first convene communities separately, through their traditional authority structures – the community elders - for discussions on conflict resolution in order to stimulate a process of self-reflection on how their migration patterns could harm their neighbours. For its programme with the Dodoth and Turkana communities, VSF Germany exploited the traditional leadership structures – including village leader and committee who work independently of the normal government system in decision-making processes – to mediate this phase of the peace process. Indeed, elders were instrumental at this stage as they decide on migration patterns of their respective communities for natural resource use. Through these meetings, the dividing and connecting lines between the two groups were identified but also the issue of competition over resources emerged as a trigger for conflict.\textsuperscript{198}

The areas bordering the two pastoralist communities that covered fertile grazing lands but were highly contested included Naporoto, Loile, Pire, Matakul, and Kalopeto.

The analysis process was taken a step further by drawing community resource maps that illustrated “boundaries with neighbouring communities, all existing resources, dry, wet, and reserve grazing areas, migration routes to markets and grazing areas (water and pastures), the conflict prone zone and existing institutions.”\textsuperscript{199} The goal here was to thoroughly scrutinize the maps through community plenary discussions and triangulations in order to outline all potential strategies for utilizing reserved dry season grazing lands during droughts. Subsequently, the final maps were presented to the rest of the community which served to raise individual awareness that there is a “need to engage neighbouring communities in order to access conflict prone areas through sharing of grazing resources with a clear resource sharing plan.”\textsuperscript{200}

The underlying process of change in attitudes and behaviour with the ‘do no harm’ approach is guided by self-reflection within respective communities that forces the latter to realize that their migration patterns can either create unity or cause dividing lines with their neighbours.

\textsuperscript{197} VSF Germany (2012), op. cit., p. 49.
\textsuperscript{198} Interview with Maurice Kiboye, Country Programmes Coordinator for Somalia and Kenya at VSF Germany, 15\textsuperscript{th} July 2015, Nairobi.
\textsuperscript{199} VSF Germany (2012), op. ct., p. 49.
\textsuperscript{200} Ibid.
This would ultimately trigger conflict over access to resources such as grazing lands and water sources. One respondent stressed that:

“The ‘Do No Harm’ approach makes individuals analyse their own actions in their own settings and how these actions relate to the conflicts that they experience and [realise] that (...) the maintenance of peace lies with them, not with the international agency as an outsider.”

In this light, one can argue that the ‘do no harm’ approach promotes a sense of ownership of the initiative, as the process of self-reflection on individual actions and their settings as a whole, encourages individuals to change their attitudes and recognise the need for collaboration with neighbouring communities on the issue of peace, which is a crucial next step of the peace process.

Thereafter, several cross-border dialogue meetings were planned and conducted within the framework of a stakeholder forum with the participation of key representatives from each community. The forum aimed to share the outcomes of resource mapping exercises at the community level. The key community representatives would meet on a reciprocal and well-programmed schedule during times that there was no conflict. Since VSF Germany’s field office was based in the northwestern border town of Lockichoggio in Kenya, a local CBO established a forum of stakeholders, which helped to improve relations between the two communities. The local CBO was also tasked to assist in community mobilization since VSF Germany could not monitor sensitization meetings between the Dodoth communities and their key representatives on the Ugandan side of the border. Selected key stakeholders were tasked to report back to their respective communities for feedback in an effort to consolidate joint resource use proposals. The aim within this network of a few selected stakeholders was to gradually build trust among participants and a sense of ownership of the initiative, change the attitudes of the hardliners towards dialogue, promote a frank exchange of ideas and ultimately build a consensus around a resource sharing proposal. Once successive joint

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201 Interview with Maurice Kiboye, Country Programmes Coordinator for Somalia and Kenya at VSF Germany, 15th July 2015, Nairobi.
202 Ibid.
203 This local CBO is called Dodoth Agro Pastoral Development Organisation (DADO) and is based in Kaabong district in Uganda.
204 VSF Germany (2012), op. cit., p. 52.
resource use proposals culminated into a final draft action plan for resource use, the latter was shared with respective communities for validation and endorsement.\textsuperscript{205}

Subsequently, a legally binding Reciprocal Grazing Agreement (RGA) on the Kenyan side of the border was signed in December 2010 between representatives of the Dodoth and Turkana communities. In the RGA, both parties pledged to coexist peacefully, share grazing and water areas during the dry season and monitor and evaluate the appropriate implementation of the agreement.\textsuperscript{206} Traditional authorities (elders) as well as local government officials who showed support and commitment to the process were witnesses during the signing ceremony and were tasked to monitor reinforcement of the agreement.\textsuperscript{207}

\textbf{6.5.3 Failed reciprocal grazing agreements: lack of inter-community networks, trust-building and alternative livelihood strategies}

Despite efforts to engage representatives of the two communities through a long process of inter-community forum meetings, the signed RGA between the Dodoth and Turkana ultimately collapsed a few months after it was signed, as fighting resumed between the two ethnic communities in 2011. During a VSF field visit to targeted communities on the Kenyan side of the border at the end of the project, survey respondents revealed that the RGA for the conflict zone area was considered invalid by the Turkana group, as they were attacked by an armed group of Dodoth herders when they entered the shared grazing zone unarmed. The field visit also revealed that community elders on the Kenyan side felt that they were not sufficiently involved the decision-making process that led to the signing of the agreement.\textsuperscript{208}

In this regard, one key respondent suggests that the RGA collapsed due to the decreased frequency of inter-community meetings on the Kenyan side of the border as a result of the 2010 political campaigns for constitutional reform in Kenya. Indeed, the consistency of peace activities reduced during heightened political campaigns, as politicians tend to solicit support from opinion leaders who are indeed the community elders, thereby disrupting parallel peace initiatives. The decreased frequency of meetings further weakened the peace process. In this regard, a key informant noted that:

\begin{footnotesize}
\begin{itemize}
\item\textsuperscript{205} Ibid., p. 50.
\item\textsuperscript{206} Ibid., p. 52.
\item\textsuperscript{207} Ibid., pp. 49-50.
\item\textsuperscript{208} Ibid., p. 54.
\end{itemize}
\end{footnotesize}
“Reinforcing peace is not something that parties of interest embrace at a go (…) it must be an intensive mobilisation of the elders and individuals who attended the meetings regularly and those who did not attend regularly. If this kind of mobilisation is not sustained, then you will get unexpected outcomes.”

In other words, this would entail building social capital through forums or a network with the participation of all stakeholders that would facilitate a consensus on decisions points for resource management.

Furthermore, weak information sharing in pastoralist settings is also considered a cause for this weak mobilisation. For this reason, mobilisation processes must take place at different levels of society, including not one committee but a forum of all the key community stakeholders in the negotiation process. The same respondent notes that minimal interactions between the two pastoralist groups and low levels of trust between both sides may have led to the re-emergence of violent events in 2011.

Other respondents argued that a common trend exists over the past years with regard to the lack of leadership for peace from elected leaders for the Dodoth group on the Ugandan side of the border. Respondents presume that this contributed to the collapse of the RGA. For instance, respondents recount that local political leaders at the village level in Kaabong district (Dodoth territory, see Map 1) are known to incite livestock raids against the Turkana on the Kenyan side, as they do not support the reporting of incidents of cattle raids to the Ugandan security forces. As such, local leadership at the village level may not have been ready to negotiate for a resource access agreement at the time that the peace process was launched. Lack of support from local leadership has a clear impact on community mobilisation for a peace process since responsible local government officials would take the role of peace ambassadors seriously and mobilise their communities for peace talks. Similarly, respondents stressed that locally-led community mobilization by a CBO on the Ugandan side of the border was further undermined, as the entry points used by VSF Germany to facilitate the negotiation process (i.e traditional elders and local government structures) were not supportive of peace. As such, they had no interest in mobilizing their own communities for peace talks. In addition to this, the environment around the time of the peace

210 Ibid.
211 Interview with Darlington Akabwai, Field veterinarian and peacebuilding practitioner in Karamoja, 7th July 2015.
process was not conducive to negotiations on joint resource use, as insecurity persisted due to Dodoth actively organizing cattle raids.\textsuperscript{212}

With the establishment of a forum for inter-community dialogue meetings on how to resolve conflict over natural resources and plan for joint resource use, VSF-G presumed that this approach would provide an incentive for the two pastoralist communities to engage in joint drought preparedness and contingency planning meetings. The latter would “help develop conflict transformational and peace building initiatives such as joint cross border projects that help bring the communities closer together in terms of building trust and co-existence as well as sustainable development (…).”\textsuperscript{213} However, in the case of the Dodoth and Turkana groups, the only initiatives that were undertaken included village-planning committees, which were established separately on both sides of the border.\textsuperscript{214} The common task of these committees across DMI implementing partners was to “provide an inclusive platform for the discussion of land-use issues within communities, coordinate with other communities, and facilitate the dissemination of seasonal forecasting and early-warning information.”\textsuperscript{215} Nonetheless, there is no evidence that efforts were made to create linkages between the two communities. In other words, development facilities that support livelihood needs, build adaptive capacity to respond to chronic drought, and at the same time, build social capital as they allow for stronger inter-community interactions beyond discussion forums. One respondent concurred that primary focus may have been given to resource-sharing agreements due to financial limitations; but it would have been better to initiate development projects concurrently to RGA negotiations, as this provides more opportunities for increased community interactions. This respondent noted that:

“When a common facility/resource is shared by the two warring communities and the two groups see the benefit of it, this will facilitate communities to come together in the first place. And as they come together they will appreciate one another and that builds confidence much faster. When it comes to signing a resource-sharing agreement, it will be easier because individuals already have that confidence.”\textsuperscript{216}

\textsuperscript{212} Interview with Achille Lokwawi, Programme Coordinator at LOKADO, 11\textsuperscript{th} July 2015, Nairobi; Interview with Augustine Kai, Chief Executive Officer at LOKADO, 11\textsuperscript{th} July 2015, Nairobi.
\textsuperscript{213} VSF Germany (2012), op. cit., p. 46.
\textsuperscript{214} Ibid., p. 52.
\textsuperscript{215} Oxfam (2013), op. cit., p. 4.
\textsuperscript{216} Interview with Maurice Kiboye, Country Programmes Coordinator for Somalia and Kenya at VSF Germany, 15\textsuperscript{th} July 2015, Nairobi.
Respondents also made considerable remarks with regard to the exemplary ‘Lokiriama’ peace agreement that was brokered by traditional elders from two bordering pastoralist groups, the Matheniko of Uganda and the Turkana of Kenya, for lasting peace between the two communities. In view of longstanding good relationships between the two communities, the latter have created stronger economic linkages. With the support from their respective governments, these communities have built infrastructures such as roads to encourage inter-communal trade. More precisely, one respondent contends that:

“A market place provides essentials that war cannot provide. Communities will make sure that the market is protected. That is why a peace road is a very vital thing in making peace because communities will make sure that the peace road is protected. These are very important infrastructures in killing the traditional perceptions [of enmity] because of the need to address livelihood needs.”

6.5.4 Summary

Based on these accounts, one can argue that the conflict-sensitive ‘do no harm’ approach to building resilience to drought through dialogue is commendable for enacting a thorough sensitization process among individual communities. Indeed, individuals reflect on how their migration patterns can trigger conflicts with their neighbours over competition for grazing land and water resources. This, in turn, fosters a change of attitudes and raises awareness for the need to engage in inter-community dialogues with their counterparts to resolve the issue of conflict over essential livelihood resources. Furthermore, inter-community dialogues lend a sense of ownership of the initiative and prompt a realization that there is a need to reach an agreement on sharing conflict prone grazing and water areas.

However, the ‘do no harm’ approach does not effectively contribute to preventing resource-based conflicts in pastoralist settings for various reasons. Indeed, the abovementioned change in attitude towards peace among communities cannot be sustained if the structures and processes within the context are not conducive to peace. VSF Germany’s intervention in the Turkana and Karamoja borderlands illustrates this argument at two levels: on the one hand, key representatives from each community that engaged in cross-border inter-community

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217 Interview with Achille Lokwawi, Programme Coordinator at LOKADO, 11th July 2015, Nairobi.
218 Interview with Darlington Akabwai, Field veterinarian and peacebuilding practitioner in Karamoja, 7th July 2015.
dialogues with the aim to consolidate resource sharing proposals and facilitate community endorsement of the former, often lack the political will to mobilise their constituencies for peace. And yet, the sustained mobilisation and collective action of communities of interest in the resource management decision-making process are required to reinforce relationships of trust between communities. On the other hand, shared livelihood facilities that help communities to meet their livelihood needs and expand alternative coping strategies in the face of severe drought were not established. Since these facilities also incentivize stronger social and economic linkages beyond inter-community dialogue meetings, their absence further undermined the trust-building process among divided communities.

Consequently, one can argue here that the structures and processes underlying VSF Germany’s conflict-sensitive approach to building resilience to drought failed to effectively prevent cross-border conflicts over resources between Dodoth and Turkana pastoralist groups. The underlying structures and processes guiding VSF Germany’s approach did not allow for strong inter-community linkages among the groups, which help to build trust and foster mutual dependence as well as active collaboration on ways to expand their livelihood options and thereby cope with the risk of drought. Hence, the sustained change of attitudes within communities towards peace could not be achieved.

7. Conclusion

In conclusion, this research has demonstrated that forms of climate change adaptation interventions matter for natural resource conflict prevention. The research hypothesis for this paper presumes that building social capital reduces the likelihood of climate induced natural resource conflict. In line with conflict transformation theory and its emphasis on structural and attitude change to support peace, climate adaptation strategies that aim to build resilience to climate change risks by developing social capital and thereby mediating access to other livelihood resources create avenues for conflict prevention. Indeed, such interventions establish an appropriate institutional framework that fosters adaptive capacity and enhances the resilience of resource-dependent livelihoods that are vulnerable to climate change risks, and at the same time facilitates changes in social attitudes towards peace. This hypothesis has been verified through the two case studies selected for this research paper.

ACTED’s community-based livelihood interventions that aimed to build the resilience of the Pian and Pokot pastoralist communities in the Uganda and Kenya borderlands to the impacts of recurrent drought effectively contributed to preventing cross-border pastoralist conflicts
over resources. Utilizing the Agro-Pastoralist Field Schools as an entry point for building resilience to the impacts of recurrent drought was instrumental for natural resource conflict prevention in two ways.

On the one hand, ACTED managed, through these social structures, to build social capital in terms of facilitated experienced-based learning and knowledge sharing on how to sustain livelihoods in the face of recurrent drought. Having empowered communities and built their resilience to cope with severe drought, subsequent cross-border exchange visits arranged for members of the pastoralist field schools motivated groups to utilize their newly acquired livelihood skills and engage in mutually beneficial trade opportunities. Consequently, sustained inter-community interactions nurtured a learning process that raised group awareness that the survival of their livelihoods in the face of recurrent drought was dependent on relational ties with one another. The dynamics and mutually beneficial collaborations within the network of pastoralist field schools helped to build relationships and trust among communities, and at the same time, secure a wider livelihood asset base, including financial resources.

On the other hand, sustained inter-community interactions within the pastoralist field school network facilitated a sustained dialogue process on the issue of conflict over contested natural resources. In line with the concepts of building adaptive capacity and resilience, new ideas and values that channelled through the pastoralist field school network were disseminated in respective communities through a process of information sharing, which ultimately promoted behavioural change on a larger scale. This, in turn, facilitated the signing of joint resource sharing agreements to access key resources such as grazing lands and water resources. In summary, the underlying structures and processes of ACTED’s approach to building livelihood resilience to drought fostered a positive change of attitude among the communities of interest towards peace.

In contrast, the conflict-sensitive approach adopted by VSF Germany for building community resilience to recurrent drought did not effectively contribute to preventing resource conflicts between the Dodoth and Turkana pastoral communities in the Uganda and Kenya borderlands. VSF Gemany’s entry point for resilience-building activities was the customary institutions for conflict resolution. These included traditional elders who decide on the migration patterns for resource use and thus are the brokers of peace agreements that give access rights to community resources. As such, these leaders promoted peaceful coexistence among groups as they also sanctioned violation of these resource-sharing agreements. In view of this scope, VSF Germany exploited traditional leadership structures - elders and peace
committee members - in both communities of interest to convene discussions on the livelihood challenges that respective communities faced and collectively find solutions to the latter. The goal of these discussions was to promote critical reflections on the conflict context and help individuals to recognise that their migration patterns could affect their neighbours and trigger conflict over resources. Through the ‘do no harm’ approach and the long analytical and self-reflective process that ensued, the parties involved changed their attitudes towards a desire to collaborate with their counterparts on how to resolve these conflicts.

These consultations took shape in several inter-community dialogue meetings, organized as a forum with the participation of key community representatives, the discussions of which culminated in a joint reciprocal grazing agreement on previously contested vital resources.

However, a number of gaps were observed with this approach to building resilience to drought, which led to the collapse of the reciprocal grazing agreement a few months after it was signed. Indeed, efforts to change social attitudes towards peace rely inherently on the sustained mobilization of communities and collective action to engage with one another, own the decision-making process on resource management and gradually build trust and better understanding of one another. This case study revealed that a lack of political will at the local leadership local level to actively advocate for peace and involve their constituencies in the decision-making process was an obstacle to ensuring community mobilization in decision-making process.

In a similar way, the absence of shared livelihood facilities that help communities to meet their livelihood needs and expand the range of alternative coping strategies in the face of severe drought, and generate stronger social and economic interactions beyond inter-community dialogue, further undermined the trust-building process between the two communities.

In view of this scope, this research study reveals that the structures and processes underlying VSF Germany’s conflict-sensitive approach to building resilience to drought failed to effectively prevent cross-border conflicts over resources between Dodoth and Turkana pastoralist groups. Arguably, the conflict-sensitive approach was marked by limited inter-community interactions, which did not help to build trust and foster mutual dependence as well as active collaboration on ways to expand livelihood strategies in the face of recurrent drought. Hence, a diminished livelihood asset base did not reinforce a sustained change of social attitudes within communities towards peace.

The research findings of this paper suggest that it is necessary to change the structures and attitudes that drive conflict as a means to resolve protracted social conflicts. The case of
pastoralist groups in the Uganda and Kenya borderlands who face protracted conflicts over resources demonstrates that established social networks that support community resilience to climate change impacts create incentives for collaborative strategies for livelihood adaptation. This in turn, increases a household’s livelihood asset base, diversifies its sources of income and ultimately reduces poverty. As a result, pastoralists in disaster prone areas become less vulnerable to conflict over scarce resources, and social attitudes thus shift towards maintaining collaborative relationships and peaceful coexistence.

In terms of policy implications for the development cooperation field, the research findings of this paper suggest that entry points matter for livelihood adaptation and resilience projects. Entry points for climate change adaptation and resilience-building projects should be geared towards building social capital through community-managed development networks that foster sustained inter-community interactions and economic linkages. These mechanisms are more likely to enhance the community’s livelihood asset base thereby reducing the risk of inter-communal conflicts over resources in the event of climate related disasters.
Bibliography


(Accessed on 28th September 2015)


The World Initiative for Sustai


Appendix: Interview questions for key informants

1. Tell me about the cross border conflict background/dynamics between the Dodoth and Turkana/Pokot and Pian communities and describe the change in dynamics since the colonial era.

2. Are there any initiatives that the Kenyan and Ugandan governments have put in place for dealing with these conflicts?

3. What are the strengths and weaknesses of these initiatives?

4. As you look back on peacebuilding as a practitioner, are there any successful peacebuilding initiatives that stand out in your mind? If so, could you describe (them) it? How did these initiatives manage to build sustainable peace?

5. In your opinion, has the community-managed disaster risk reduction methodology to community development succeeded in mitigating resource conflicts in this area?

6. In your opinion, what led to the collapse of the VSF Germany facilitated reciprocal grazing agreement signed between Dodoth and Turkana communities bordering the contested grazing areas of Naporoto, Loile, Pire, Matakul, and Kalopeto in 2010? In your opinion, what contributed to the signing of a resource sharing agreement facilitated by ACTED between the Pian and Pokot communities in 2012?

7. Were local communities supportive of VSF Germany’s/ACTED’s peacebuilding initiative?

8. What do you think contributed to them supporting this initiative?

9. What entry point(s) were used to connect both communities?

10. Did these entry points take into consideration the cultural settings within the communities? If so, how did they do that?

11. What is your opinion on the traditional pastoralist practice of maintaining reciprocal social and economic relationships to cope with disasters caused by natural hazards?

12. How would you describe the role that these broader reciprocal social relations and economic collaborations between communities still play in contemporary conflict management within the Karamoja Cluster?
13. In your opinion, is there a way in which the negative perceptions of different herding groups as enemies can be transformed through peacebuilding activities?